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DECODING BAFFLING BEHAVIORS

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ON THE INSIDE

Contents

CULTURE OF THE CAT

8 **CUTEST KITTIES**
Individual beauty is caught in the lens of the photographer.

16 **5 WAYS TO HELP YOUR INDOOR CAT FEEL WILD**
Felines have a need for nature.

18 **A PARTNERSHIP IS BORN**
We've never managed to truly domesticate cats. That's what makes the relationship sizzle.

24 **WHAT MEOW MEANS**
Here's what your cat is trying to say.

30 **FINICKY FELINES**
Ways to deal with a picky eater.

THE FELINE SELF

36 **5 WAYS TO READ YOUR PET'S BODY LANGUAGE**
Your cat's features and movements reveal her inner feelings.

38 **DO WE SEE WHAT THEY SEE?**
Cats perceive a world of color of which we are only dimly aware.

42 **THE SOCIAL MIND OF CATS**
They seek real intimacy with their human family and friends.

48 **STRANGER THINGS**
Understanding baffling behaviors.

54 **KICKING LITTER**
Help for the bathroom mess.

BETTER TOGETHER

58 **5 WAYS TO TOUCH (OR NOT TOUCH) A CAT**
The face is better than the stomach, but let your cat decide.

60 **MISSING YOU**
In the post-pandemic era, pets are suffering from separation anxiety. Here's how to help.

66 **IS YOUR KITTY CONTROLLING YOUR MIND?**
The feline infection toxoplasmosis tunes the human brain.

72 **FREE THEM**
A look at why cats need more control over their lives.

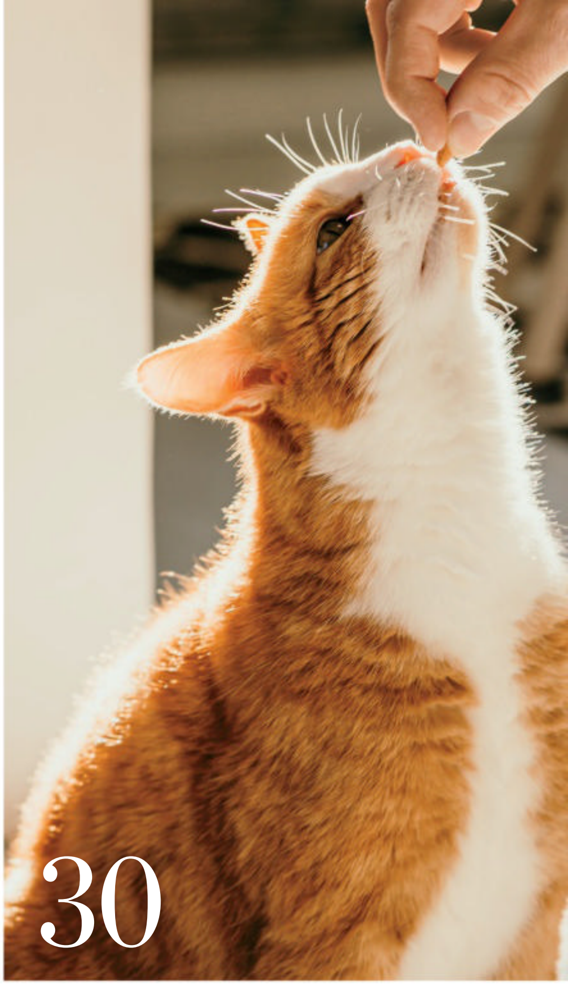
HOW TO HELP YOUR PET THRIVE

80 **5 WAYS TO BOOST YOUR CAT'S HEALTH**
Wellness tips for your pet.

82 **TRAVELS WITH YOUR KITTY**
Here's how to make any trip easier for you and your cat.

88 **GIVE YOUR PET A GIFT**
Yes, you should offer your cat a present on those special occasions.

94 **LIVES OF MILLION-DOLLAR CATS**
A tale of feline heirs. Plus, tips for your will and estate planning.



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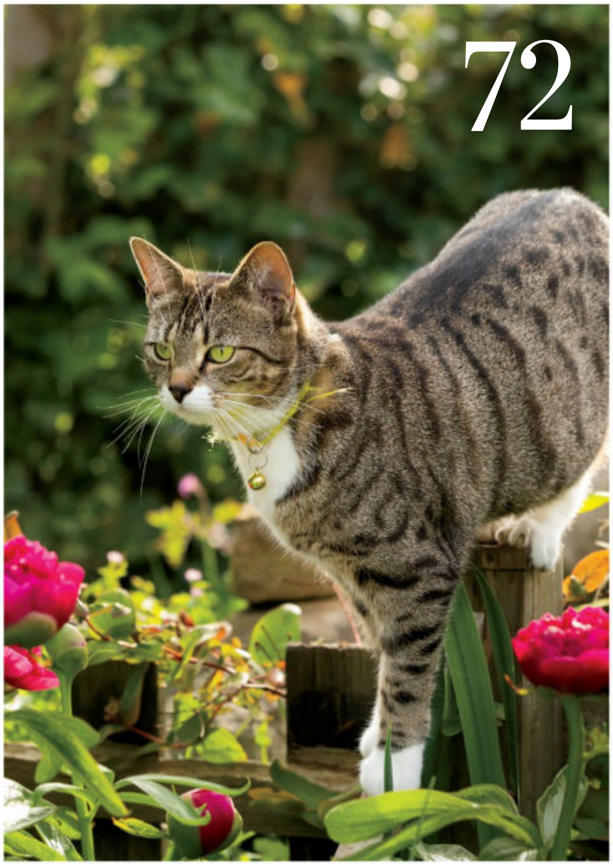


72

42

Born Free

From taking your cats on trips to giving them gifts to remembering them in your will, this issue of *Inside Your Cat's Mind* explains how to make our kitties feel safe and loved. The true key to feline happiness, covered in this issue, turns out to be freedom, according to the bioethicist Jessica Pierce in her important essay, "Free Them." Our cats, themselves, should be given space to decide what and where to eat or sleep, when to play, when you can touch them and when they need time alone.

A cat is happiest as the master of her day, and it's this very penchant for self-determination that has caused some people to question the sincerity of cats and the bond they have with us. Put your doubts to rest. In a series of pieces inside this issue we explain how cats, though not quite as domesticated as dogs, came to be our faithful life companions; how they invented a language for us; and why they miss us badly when we're gone.

We've also devoted several pages to the baffling aspects of cat behaviors. If you want to learn why your cat kicks litter or rubs his cheek all over your face, just read on!

Pamela Weintraub
Editor-in-Chief

CULTURE OF THE CAT

They live in our homes, but their language, food tastes and love of the wild remain their own.

This outdoor cat joyously follows her instincts in a living, vibrating field of flowers, sunshine, mammals and singing birds.

A cat's ears may look small and delicate, but they are able to hear some 4 to 5 times farther than the human ear.

ADORABILITY

Cutest Kitties

Feast your eyes on the sweetest pics we've come across. While some breeds are known for charm, individual beauty is caught in the lens of the photographer.

This happy British shorthair loves nothing more than lounging around with his human family at home.

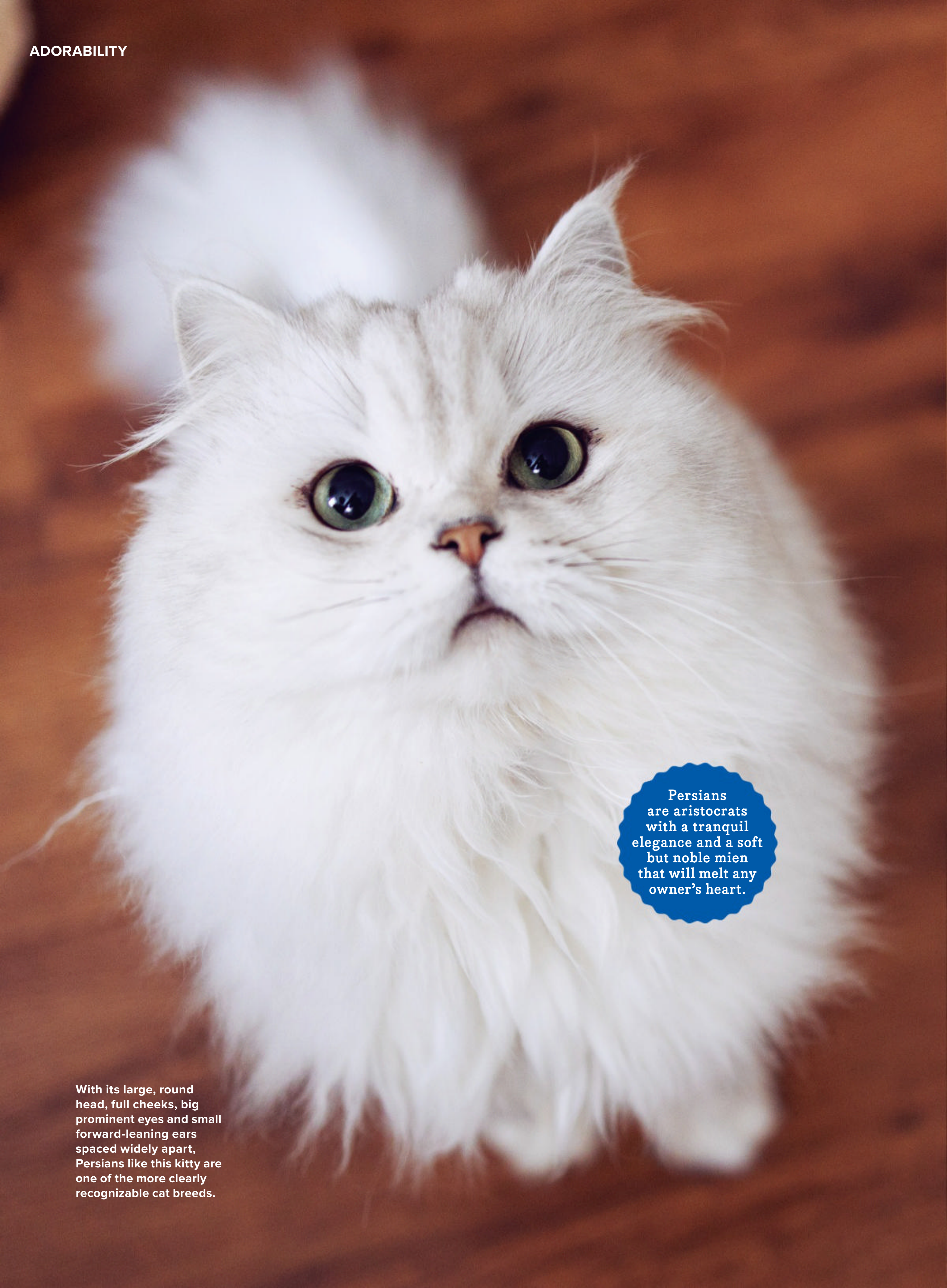
Not all cats have nine lives, but the British shorthair comes close with an extraordinary life expectancy of around 20 years.

Different types and breeds can coexist in the home wonderfully once they get to know one another, as you can see from the intimacy expressed by this ginger kitten and adult tabby—clearly a breed apart. Typically, an adult cat may take a new young feline arrival under its wing.

Kittens born in a single litter love to cuddle. If kept together, they will always share their sleep time and be best friends for life.

With blue eyes, black face and whitish fur, this cat can be instantly recognized as a classic Siamese.

Siamese cats are vocal; in fact, it's one of the chattiest of all feline breeds. Live with a Siamese and you'll be serenaded by telling, imploring meows throughout the day.



Persians are aristocrats with a tranquil elegance and a soft but noble mien that will melt any owner's heart.

With its large, round head, full cheeks, big prominent eyes and small forward-leaning ears spaced widely apart, Persians like this kitty are one of the more clearly recognizable cat breeds.

Cats have some of the most endearing poses in the animal kingdom. In performing his natural ablutions, with his eyes closed as if in ecstasy, this tortoiseshell-tabby evinces a dainty fastidiousness that can't help but produce "Awwws."

PLAYBOOK

5 Ways to Help Your Indoor Cat Feel Wild

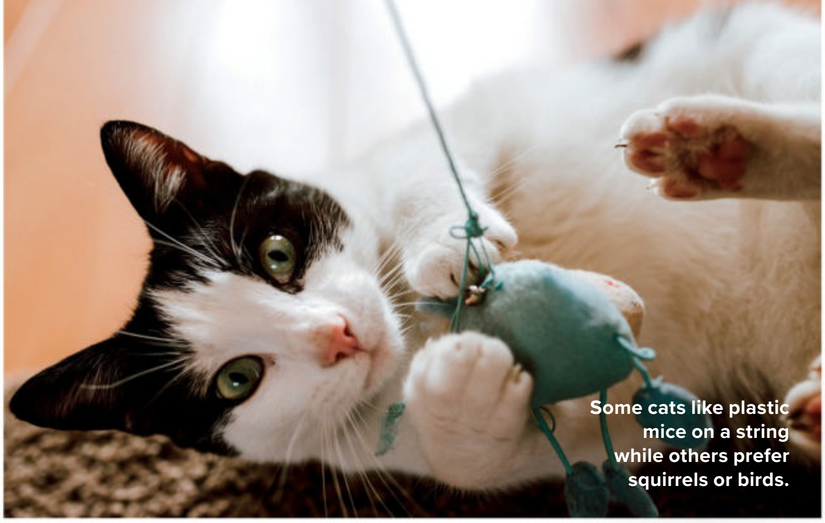
Felines have a need for nature. Here's how to indulge their free spirit.

Your indoor cat has adapted to your human home, but he still needs a sense of the outdoors to feel truly alive. Given all the threats cats face from other predators and road traffic, and the predatory menace they represent to small mammals and birds, your best bet is bringing the wild inside. Here's how.

1 Provide a Great View of the Jungle Outside

Make sure a perch is available for your cat so he can jump up, sit on a sill and look outside—a view of the outdoors from a special window, with access to sounds and scents of nature would be ideal. Even a city tree with squirrels and birds will keep your kitty enthralled for hours. Just keep the shade up when you leave home.

Our cats love watching the world from a window, all the better to be the masters of everything that they survey.



Some cats like plastic mice on a string while others prefer squirrels or birds.

Consider both a scratching post and a separate cat condo with tunnels to hide in and a perch for sleep.

2 Awaken the Inner Hunter

Even a cat that never goes outdoors has the urge to hunt. That means toys on sticks that move and dart like little animals. Your cat needs your involvement here too, obviously. Only a human like you can make her toys move like a real bird, mouse or bug.

3 Build a Catio

If you have a little yard space, you can create a wood or metal screened patio for your feline companion. The thrill of being safely immersed in nature while he observes prey animals he might otherwise hunt provides the best of both worlds for all parties. You can buy a ready-made catio or build one yourself; instructions on how to do so abound online.

4 Let Her Roam

In the wild, cats are used to roaming a fair amount of territory and exploring multiple levels from the ground to the trees. Your cat will do best if she can roam as well through your house or apartment, especially if you provide scratching posts, boxes to hide in and a climbing structure that reaches almost to the ceiling. It's not the jungle, but good enough to keep your kitty happy and fit.

5 Put on a TV Show

A new raft of shows made specifically for cats can be engaging and stimulating for brief periods of time. Just remember that content matters and human TV can do your cat more harm than good. We especially recommend searching for cat-specific TV from PawTracks and the Cat Entertainment Channel on YouTube. Three selections that our editors especially love include *The Ultimate Cat TV Video: An Hour of Birds* by Paul Dinning, *Eight Hours of Birds and Squirrels* by Birder King and *Mouse Videos* by Paul Dinning. Amazon Prime also has free cat TV that you can stream.

For these two indoor cats, their safe and lively catio is a home close to nature, yet apart from it.

There's nothing like a video featuring multiple species of birds to keep your cat enthralled.

House cats have virtually the same genes as their wild forebears, equipping them to leap, hunt in the wild and see at dusk.

Your cat loves you but if push came to shove, she would probably be able to survive on her own.

HOW IT BEGAN

A Partnership Is Born

We live happily with our feline friends, but we've never managed to domesticate them. That's what makes the relationship sizzle.

BY KATJA PETTINEN

It barely needs stating: Cats are not dogs. Both these animals have joined human homes as valued and beloved pets, yet while dogs are deeply dependent on us, tuned in to our every mood, cats seem to go their own way. Despite this difference, humans and cats have also forged a deep, enduring bond.

To grasp the nature of the human-feline partnership, we've got to go back in time. In many accounts about how, when and where cats came to share their lives with humans, the ancient Egyptians are credited as the main actors. Emerging some 5,000 years ago, the Egyptian civilization is one of the oldest in the world, with some of the first forms of writing—including descriptions of cats. Yet while the Egyptians held cats in high esteem, even burying them in pyramids and creating massive statues for them, they were not the first ones to embrace this cross-species relationship.

A more ancient set of clues comes from the burial of a man who lived on the Mediterranean island of Cyprus, close to the coast of Turkey, some 9,000 years ago. What is unique about this grave is that the man was buried with an 8-month-old cat, both of their bodies positioned to face the west. This was a carefully crafted burial meant to shepherd the man into the afterlife.

In fact, the human-cat relationship reaches as far back as 10,000 years, before any civilizations or cities,

This bronze sculpture of a sitting cat with decorative collar in the Egyptian Museum hails from the 26th dynasty of Egypt, to around 600 BCE.

but with one new feature in human existence: agriculture. Once humans shifted from foraging for foods to producing foods, they faced the challenge of storage. This new accumulation of food surplus brought many uninvited guests, including cats. Cats, who are carnivores, did not care to eat these grains. Rather, they caught the mice, rats and even birds who showed up to enjoy the brand-new buffet of grains.

It didn't take long for cats to become valued, even beloved, entering the human fold. Besides the ancient burials of the day, cats are also carved and shaped into stone and clay figures throughout the Near East. All around, both the material remains and the representational figures tell us a very concrete story about how special the human-cat relationship has been for thousands of years. And today, roughly every third household in the U.S. continues this ancient relationship, having a cat as part of their home. These cats are fed and cared for, but besides occasional mouse catching, they do not contribute to household tasks, particularly in urban settings. All around, the way that cats exist in human culture, now and in the past, stands out when we compare them to the other animals that have become significant for humans over time.

Ancient ties to felines are demonstrated by this Egyptian cat mummy in the British Museum.

DOMESTIC, NOT DOMESTICATED

One big question is how to classify our feline friends. Surely, we can't group cats with domesticated animals, a category that includes the many species that humans consume as food: cows, chickens, sheep, reindeer and the rest.

Most animals that have been domesticated are there to fulfill some kind of functional relationship for humans: to provide us with calories, hides or wool, or as a means of transportation. That's not to say that humans don't develop close feelings for some of these species, such as horses. In each category, though, these species are there to perform tasks. But cats just don't pull sleds all that well!

For biologists, who commonly wrestle with these issues of classification, the term "domesticated" means that there is a clear physical difference between a species in the wild and its domesticated counterpart. Since Charles Darwin began to write about this in the 1800s, that difference has been dubbed the "domestication syndrome." In part, the term "syndrome" here highlights the fact that the domesticated forms no longer can sustain themselves in the wild. Instead, the new variant of the species—the domesticated version—is dependent on humans. This change results from "artificial selection" rather than natural selection, operating in nature. Through artificial selection, humans now increasingly control three main aspects of animals' lives: food, shelter and reproduction.

It's clear that many things become altered if you keep an animal captive. Some of the changes come about because, in contrast to life in the wild, animals in captivity no longer go out and acquire their own food. Nor do captive animals traverse the same amount of territory as their wild forebears. This decline in movement changes the body on multiple levels. Pretty quickly, it becomes a loop: The less you move, the less you can move. So all in all, domesticated animals become increasingly dependent on humans. Once this pattern is repeated over many generations, the changes become encoded in the biology of these animals, and a new, fully domesticated species comes into existence.

We can see such overall patterns with dogs. If you contrast dogs and

> Though reliant on humans, domesticated animals can grieve the loss of friends and love and care for their young.

Cats lived alongside humans for millennia without exactly living with them.

These outdoor cats benefit from nearby humans, who contribute food for their nourishment and nooks and crannies where they can hide.

wolves, the two are biologically distinct species, with observable differences present across physical features and a range of behaviors. One of these species you can bring into the living room to watch TV with you or take to the park. The other one simply won't fit into these scenarios—wolves are fully wild and cannot be turned into household pets.

How can we apply these insights to cats, given our connection to them as pets? Our two species are close. Either we acquire them as kittens and build a relationship from the start, or we may come across a feral cat in an alley and with some time, patience and good treats, this individual can be tamed. And this is where all species domestication got its start: taming an individual, and then bringing consistent control over the three key elements in that creature's life: food, shelter and sex.

But does the formula apply to cats? When it comes to food, cats enjoy the Friskies and other treats we provide them with. But any wild animal will consume food if we provide it. The real question with food is: Can the animals still provide for themselves? And with cats, somewhat unfortunately, we know all too well that they can hunt to kill. Outdoor cats in the U.S. alone kill hundreds of millions of birds every year, even contributing to avian species extinction. Cats also kill mice and other rodents, but as humans, we tend to either welcome this predation or not concern ourselves too much with it.

Because cats maintain their capacity for predation, because they go out and hunt birds and rodents with abandon, they do not fall into "domestication syndrome." The shelter part as well is also taken care of by the small size of cats: It's easy for them to find places to tuck into, even in cities with all those sheds, alleyways and dumpsters. Cats certainly seem to enjoy the comfort of our homes, but if need be they can also shelter themselves.

This brings us to that third factor, sex. One of the most basic concepts in biological conversations about species is "gene flow"—the movement of genetic materials from one population to another. And there really is only one main way for genes to "flow": through acts of reproduction.

When kitties roam the streets, for this or that reason, even just for that classic cat curiosity, they will meet other cats. And if neither is neutered, and the female is in heat, sex likely follows. Because most cats enter this world from such non-human mediated processes, there is a great deal of gene flow happening: Different populations of cats are genetically continuously connected. Even if your individual kitty is a happy indoor couch potato, they are still part of the genetic population of roamers and hunters.

Broader analyses show that the domestic cat (*Felis silvestris catus*) is very close genetically, in fact nearly identical, with the wild cat (*Felis silvestris*). In short, their genes have traveled across the generations. It is this gene flow that maintains biological preparedness in cats to keep moving, hunting and roaming. They also have hidden deadly weapons, the claws, and a truly exceptional hearing range, being able to detect ultrasonic sounds, just as bats can.

MODERN LIVES

The long and short of it is that modern cats are domestic, often living with us, but they are not actually domesticated. In contrast to dogs, which humans have been biologically sculpting much more closely and for much longer, cats do not enter the world prepared to communicate with humans as a species. But at times, individual cats do choose to hear us. That's the cat's life in summary: tamable, yes, domesticated, not so much.

And that just might be part of the draw: Cats mess with our neat human categories. In this, they remind us that life maybe cannot and need not be so fully controlled.

Katja Pettinen is a cultural anthropologist at Mount Royal University in Canada.

PERKS

Cat Advantage

Kitties aren't just adorable, they actually improve our health and state of mind. Here are five benefits cat companions have come to expect.

1 Lowered Stress

Having a cat can stimulate production of the love and bonding hormone oxytocin, making you calmer, less lonely and less stressed.

2 Quicker Healing

Your kitty's purrs range between 25 and 140 Hz, the wavelength frequency also shown to aid the repair of bones, joints and tendons, and the healing of wounds. Researchers point out that cats recover quickly from these injuries and purrs may be at the root.

3 Shorter Headaches

Anecdotally, some people report that their migraines clear more rapidly when lying or cuddling with their furry friend.

4 Better Sleep

More than half of those who own cats actually sleep with them between the sheets, with good reason. Researchers say that just having your cat in bed reduces anxiety and night terrors.

5 A Boost in Mood and Outlook

The phenomenon of watching cat videos on the internet boosts viewers' energy and positive emotions and decreases negative feelings, according to a study from Indiana University Media School.

—Pamela Weintraub

Cats might be independent, but they often sleep with their human and feel concern when we are unwell.

BEING VOCAL

Q&A: What Meow Means

The linguist Susanne Schötz has translated the vocalizations uttered by domestic cats. **BY PAMELA WEINTRAUB**

Cats have a unique language constructed especially for humans and made of meows. Susanne Schötz, a specialist in human melody at Lund University in Sweden and author of *The Secret Language of Cats* ultimately tuned in to that feline cadence. “A meow in the kitchen at breakfast time was different than meow when a cat was locked up in a closet by mistake,” she says. Her cat’s meows—and your cat’s—vary with situation, need and intent. Schötz says meows didn’t start with domestication, but it was domestication that taught cats how to use meows to communicate with us. Unlike cats, we can’t identify others through sense of smell, and we have a narrower visual field than they do. So cats have discovered that, to get our attention, sound works best. And while domestication didn’t make the cat meow, it probably changed the quality of that sound. Indeed, the meow is similar to the cry of the human infant, sure to hit the human heart and get us to respond.

In the Q&A interview that follows, Schötz describes the results of her research and how it can help us interpret the vocalizations of our cats at home.

Do cats communicate differently with humans than with other cats?

Meowing is mainly addressed to humans. Kittens meow but adult cats rarely meow to each other. Adult cats that are friends greet each other with trilling or purring. I have cats that are siblings, and they sometimes hiss at each other when they get in each other’s way.

Does every meow mean the same thing?

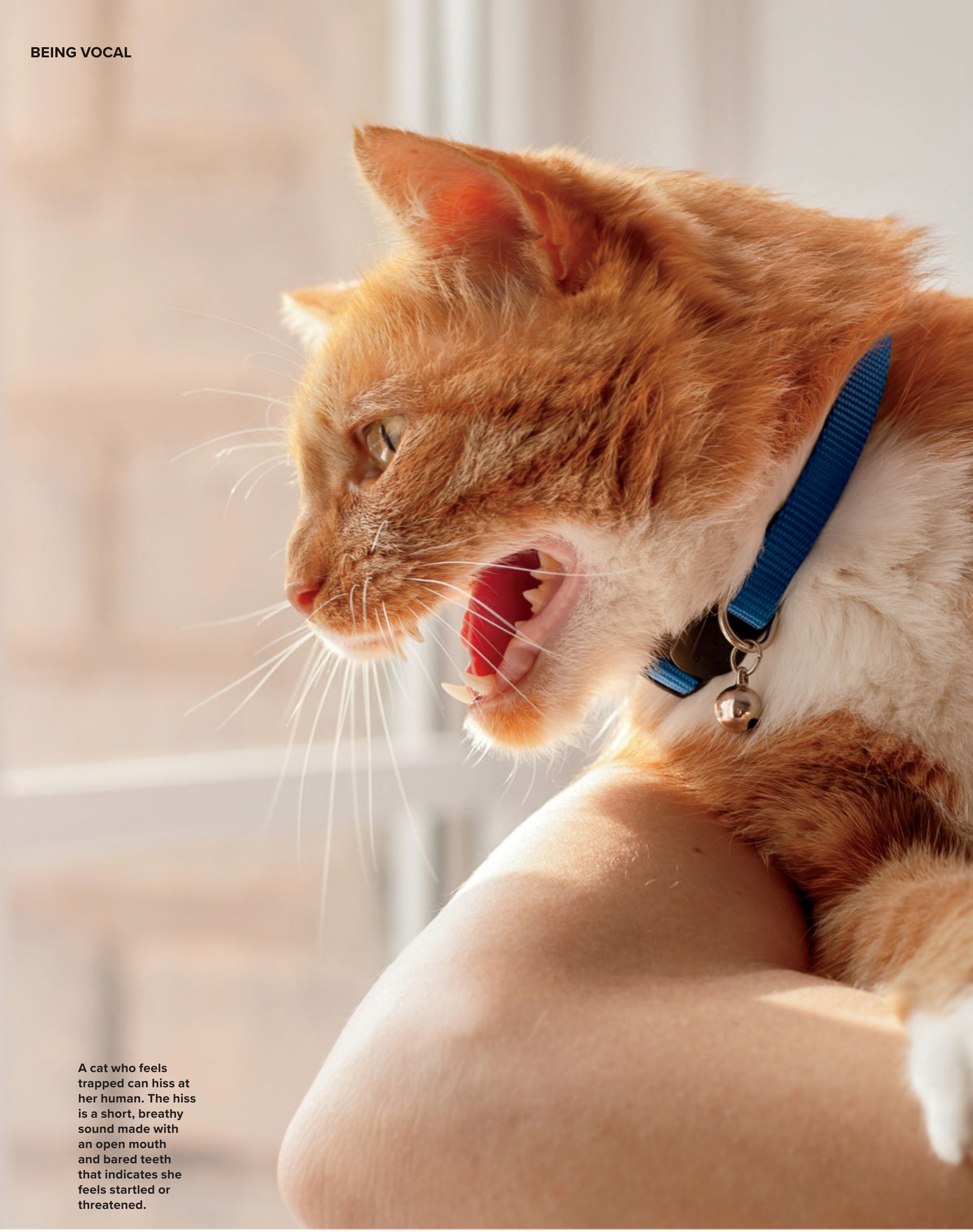
After we got our grant, we started to record more cats and, mainly, the conversation between humans and cats. We recorded the cats in several contexts: Feeding time, when cats or humans wanted to play, when they want to be let out.... Bringing the cats to vets in carriers. We found variation depending on the context.

Can you describe the variation?

All the categories are interesting. Trilling is a friendly sound between

This kitty with her mouth open is issuing a call to play to her human companion. She just wants some fun!

Your pet is constructing a language primed to get your attention and prompt response.



A cat who feels trapped can hiss at her human. The hiss is a short, breathy sound made with an open mouth and bared teeth that indicates she feels startled or threatened.

cats who are friends. Hissing, howling, spitting, growling, snarling—these are aggressive or defensive sounds. Meow means I'm hungry, I want to play, I'm bored, I'm in distress. The meow has many more meanings and so we are studying it first by looking at dialect and melody.

Can you explain what the terms dialect and melody mean for the study of vocal language?
In the human languages I study, a dialect is a type of language spoken in a specific geographic region. Melody, or intonation, refers to rises and falls and other variations of tone from dialect to dialect. Sometimes melody can be universal across dialects. For instance, I raise my voice at the end of a sentence if I'm uncertain or if we are friendly, as in this question: "Is this OK?" On the other hand, if I want to say something I am certain of, my voice will fall: "This is what melody is all about."

Susanne Schötz discovered that cats can take on accents aligned with a particular locale.

But melody can vary from dialect to dialect as well. How does that work in humans?
Let's look at an example in a language you probably don't know, Swedish, where we have several dialects and use melody to distinguish between them. In south Swedish, which is my dialect, for instance, the word for "spirit" is "andan"—we pronounce it "AN-dan," with a peak at the first syllable. But in Stockholm there are two tonal peaks, and they say "AN-DAN." There are languages like Mandarin Chinese that have four tones on the same syllable to mean four things, and some Chinese dialects have six different tones for a single word.

Now let's apply these same rules to the secret language of cats. How does that work?
There are so many meow variants, and I have been able to use my knowledge of phonetic methods to divide meows into subtypes based on types of vowels and consonants; loudness and softness; and whether the melody is falling, or rising, or rising and then falling–things like that.

What are the subtypes?
I have found four subtypes. One is the "mew," which is a high-pitched meow that often contains the "e" and "i" vowels—"mieww!!" Kittens use this when distressed or need attention from other cats. Adult cats keep this sound to get attention from humans. There is the squeak, with an "ahhhh vowel." Squeaks are made with an open mouth—the sound imitates distress but the squeaking cat really just wants to play. Then there is what I call the "meo moo"; this is a sad sound. "I am trapped in my carrier, trapped indoors, feeling stress." In the "meo moo" the melody rises and then falls toward the end. The "meo-mooing" cat does not want to be there. Finally, we have the typical "meow," which includes several vowels.

And this has a special sound too?
It sounds like it is spelled. The mouth opens, then closes. The meowing cat is seeking attention, but can have a range of meanings

depending on the meow. She can sound hungry, or be asking to cuddle or play. Depending on the degree of urgency, these meows can vary indefinitely. This sound contains a lot of variation and that makes it especially interesting to me.

I take it the general meow is not really a one-size-fits-all universal language but rather varies across a range of dialects and melodies.
Exactly. It varies in vowels, in tone of voice, in melody—and each cat has a personal voice quality, some in a low pitch and others in a high pitch, and depending on a cat, these can mean the same thing. It is up to a human caretaker to decode and learn the differences in sound, to interpret. Cats try different sounds when they communicate with their humans, and those sounds that get the results—for instance, if a sound is effective in getting the owner to feed the cat—those are the sounds the cat keeps on using for that goal.

What about the sounds beyond the meow that cats use to communicate with other cats?
Notice two cats howling at each other. The cat with the loudest, darkest, lowest frequency howl tends to win. That sound says, I am the biggest and most aggressive. When one cat wins the howling contest the other cat goes away very slowly. The one with the higher pitched howling turns around in slow motion and leaves the territory of the winning cat. Sometimes fighting is inevitable but there are many instances where cats resolve their conflict simply by howling at each other.

What happens with equal howls?
I have never witnessed this happening.

And other forms of language?
Cats communicate through body posture, head movements, even eye and ear movements. The wagging tail means the cat is attentive—but the more the tail wags, the more upset the cat might be getting. If the tail is like a large brush and the fur is piled up—that animal is saying I want to be big, she's defending herself. (For more on feline body language see "5 Ways to Read Your Pet's Body Language," page 36.)

And what about the sense of smell? Cats famously mark their territories with scent.
The cat's sense of smell is not as good as the dog's, but it is so much better than ours. It's been harder for us to study because we don't pick up the scents ourselves. We know that females in heat leave their scent, and cats of both genders use scent to mark their territory on a tree. Because scents fade with time, they reveal how long ago the other cat was there—and its gender and age. A scent can even communicate a cat's state of health.

What about homes with multiple cats? Do cats within a given space pick up the same language?
Cats living together in a group develop a group dialect and listen to what other cats are saying to get

Humans pick up melodies and rhythms in spoken language after listening to their cats.

what they want, and they adopt those successful sounds. Cats also literally pick up a tone of voice from their humans.

Can you explain how cats can ultimately benefit from all of this work you've done? We will be able to better understand our cats, not just in our homes, but in shelters and sanctuaries. We'll be able to hear the difference between a cat who is stressed and one in pain.

Human language is ancient and has been passed down generation to generation for the length of our species. Is the same true for cats? Sometimes breeds of cats vocalize differently. Siamese cats tend to be very vocal. Bengals tend to vocalize in longer and darker tones of voice. Breed has something to do with how cats vocalize—but the melodies they pick up from their humans and other cats influence the dialect as well. Cats do not have a language like humans—they don't have grammar or a large number of words. But they have what they need.

> After meows, purrs expressing satisfaction or pleasure are the most common form of cat-to-human communication.

A cat's palate craves plenty of variety, the taste of the wild and a steady supply of protein.

This kitty loves nothing more than to nibble on treats of various flavors.

FOODIES

Finicky Felines

Does your pet gobble up a meal one day and turn her nose up the next? Here's how to deal with a picky eater.

BY MICHELE C. HOLLOW

When I brought my cats home from a local city animal shelter, I almost tripped over them at suppertime. They associated the can opener with a dinner bell. They gobbled up whatever I put down. Not a speck of food remained in their bowls.

Breakfast consisted of dry food. Dinner was wet canned food. No complaints.

I varied the menu. Wet food varieties included pâté, shredded meats and small bite-size bits. The dry food, served in the morning, changed. I tried different brands. Everything went well until it didn't. Both cats ignored the meaty bits and shredded varieties. After a few months of variety, they only wanted, and still to this day (nine years later) only want, pâté.

"I can't say with certainty that all cats are finicky eaters," Samantha Bell, cat expert for Best Friends Animal Society, says, "but we know many are."

WHY ARE SOME CATS SO CHOOSY?

The reasons are plentiful, according to Bell. "At their core, cats are predators. Our domestic house cats are closely related to their wild ancestors. And their instincts still tell them to vary what they eat so their bodies get all the nutrients they require. A diet of only mice will be missing the nutrients they can get from birds, for example. So, they're hardwired to want a little variety in their diet."

AGE IS A FACTOR

"As cats age, their sense of smell becomes diminished so they may not be as interested in their food," Bell says. "This could also be the case if a cat is getting an upper respiratory infection (a kitty cold). If they have any gastrointestinal issues or sensitivities, those could make their food less appetizing."

APPETITE KILLERS

Dental concerns can cause your cat to eat less because chewing could be difficult or painful. Underlying health issues like kidney disease, pancreatitis, hyperthyroidism and cancer are often discovered when a cat refuses to eat or becomes finicky. Other causes include:

- Depression
- Stress
- Anxiety

A SCIENTIFIC EXPLANATION

According to a study in the journal *Royal Society Open Science*, cats prefer foods with a 1–4 ratio of protein to fat. Cats are carnivores and need to eat a protein-rich diet. One essential amino acid found in protein is taurine. Without taurine in their diets, cats can develop serious health problems such as blindness and heart disease.

HELPING YOUR PET GO FOR DIVERSITY

"As soon as you notice any behavior change in your cat, like finicky eating, the first thing to do is to get them to a vet," Bell says. "There is often an underlying medical reason."

If they get a clean bill of health from the vet, you can:

- Warm their food so it has a stronger smell.
- Try different brands, flavors and textures of food.
- Add another food bowl in a different location.
- Try serving them at different times of the day and when you find times they like, stick to that schedule.
- Try serving their food on different bowls and plates.
- Clean each bowl and their water dish after each meal.
- Sprinkle a probiotic called FortiFlora, designed to settle digestive troubles, on top of their food. According to Bell, "It's quite tasty for cats."
- Pour some of the oil from a can of tuna over your cat's food.
- Stop feeding them for a day, if they're not eating. If it continues, take them back to their veterinarian.
- Leave a small amount of dry food out. Some cats are nibblers and prefer grazing.

"You can also play with them using a wand toy," Bell says. "Their hunting cycle is hunt, catch, kill, eat, groom and sleep. So after hunting and killing a wand toy, their instincts tell them it's time to eat."

When Bell's three senior cats became finicky, she changed their diet. "I discovered they only want wet food that has chunks or shreds in it," she says.

COOKING FOR KITTY

If you have the time, talk to your cat's veterinarian about what to include in the food. Commercial cat food contains protein, carbohydrates and supplements; the supplements in your cat's food are essential for their overall health. While some online pet food retailers sell supplements, it's wise to discuss this with your veterinarian to make sure your cat gets a healthy and balanced diet.

SHARING ISSUES

Each cat should ideally have her own bowl. My two cats are sisters and the smaller one sometimes bullies the bigger one. Some cats need to be fed in separate rooms because they don't feel comfortable with another cat around who may encroach on their territory.

LIMIT THE TREATS

"Cats' stomachs are the size of a ping-pong ball," Bell explains. "If you give your cat several treats, it's going to fill them up and then they won't be as hungry for their regular food. So, it's not so much that the flavor of the treats is making them finicky. They're just filling up on things other than their regular food."

Some cats are fine sharing a dish, but most prefer to have their own individual bowl or plate.

Bell recommends breaking treats into tiny pieces so they don't become stuffed. "The same goes for human food," she says, "I will give my cats a teeny tiny speck of cheese now and then. But I make sure it's not enough to affect their meals or their digestive system."

FROM KITTEN TO ADULT TO SENIOR

As your cat ages throughout her life, you will need to change her food. Kitten food is high in calories and nutrients designed for your cat's development. Once they reach adulthood, at age 1, those extra calories in kitten food can lead to added weight.

When your cat reaches age 7, you'll want to switch from adult to senior cat food, which supports joint health and a cat's immune system. Most senior cat foods are slightly lower in calories than adult foods, which is ideal for a less active cat.

> **Much like cats in the wild, the kitty at home may prefer to graze her nutrients or take several small meals in a day.**

Switching food should occur gradually, over a seven-to-10-day period. On days one and two, give your cat three-quarters of the normal food and add one-quarter of the new food. Here's how to proceed during the rest of the transition:

- On days three and four, serve half of your cat's current food and half of the new food.
- For days five to seven, use a ratio of three-quarters of the new food to one-quarter of the former food.
- For days eight to 10, serve only the new food.

Taking a week to change your cat's diet helps to avoid digestive woes and allows your cat time to adjust to the change. If during this time your cat doesn't adjust, try again by extending the transition period for another week. If this doesn't work, try other brands, flavors and textures.

If your cat goes a couple of days without eating, take him to the veterinarian.

THE FELINE SELF

Understanding cats' baffling behaviors, their unique need for love and the ability to see things we cannot.

PLAYBOOK

5 Ways to Read Your Pet's Body Language

From the position of whiskers to the flick of a tail, a kitty's features and movement reveal his inner feelings and state of mind.

If you can only read the signs, your cat will tell you much of what you need to know about her mood, perspective and state of mind.

1 Tail Tales

A wagging tail means your cat is attentive—but if the tail starts wagging too much, your cat could be getting upset. A raised tail is a sign of acceptance and openness, especially in a kitten.

This ginger kitten reveals her openness with her tail.

A wagging tail indicates a state of alert readiness: Out in the jungle, what will happen to kitty next?

Whiskers pointing to the back of the head could indicate a feline on edge.

Look this cat directly in the eye and she may swat or claw at you. Be careful!

2 The Eyes Have It

Never look directly into the eyes of a strange cat for long—he will perceive it as aggressive and challenging, and could attack. You'll recognize the fear in that cat when pupils become particularly wide. Especially constricted pupils suggest your cat may feel tense. Surprisingly, the best way to make eye contact with a cat is through the squint and blink—your cat blinking back at you suggests he feels safe.

This cat with forward-pointing ears could be watching his human prepare his meal.

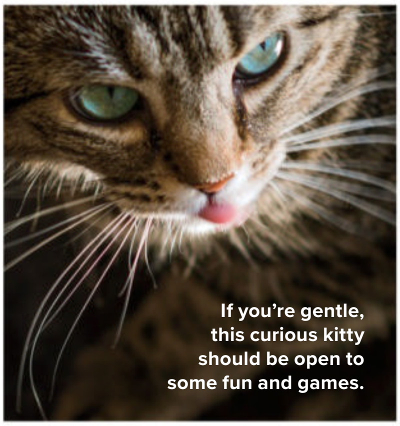
A cat with back-slanting ears might be about to bolt and hide.

3 What Ears Say

Ears pointed forward means your cat is focusing on you, but ears pointed back suggests your cat could be afraid.

4 A Whisker Away

Whiskers, those sensitive tactile hairs that grow on a cat's muzzle and elsewhere around her body, are sentinels of emotion and mood. Whiskers bent back suggest an anxious, uncomfortable kitty. Whiskers bent forward, just like ears bent forward, reveal a cat at attention and alert to the world.



If you're gentle, this curious kitty should be open to some fun and games.

5 Making a Stand

When the body is stiff and erect, the tail raised like a brush, your cat is in a protective stance, trying to make himself big. A cat on hind legs could be playing a game.

A cat can look bigger when he stands at attention like this.

VISION

Do We See What They See?

Can cats detect the ultraviolet rays of a black light? It's possible they live in a world of color of which we are only dimly aware.

Cats can see better than we can in the dim light of dawn and dusk, but the anatomy of their eyes puts them at a color deficit. Like a colorblind person, they are not good at distinguishing red from green because their eyes don't have the number or types of cones to differentiate those hues. Indeed, people have 10 times as many cones as our feline companions. Thus, put a bright red ball on a green lawn and a cat might miss it (unless it's big enough for its shape to stand out). A cat's world,

Whether inside or out and about, when the light is low your cat can pick up far more visual detail than you can.

This cat likely sees details that the night vision security cameras guarding your house may miss.

at least from our perspective, is largely a limited palette of blues and yellows—and grays.

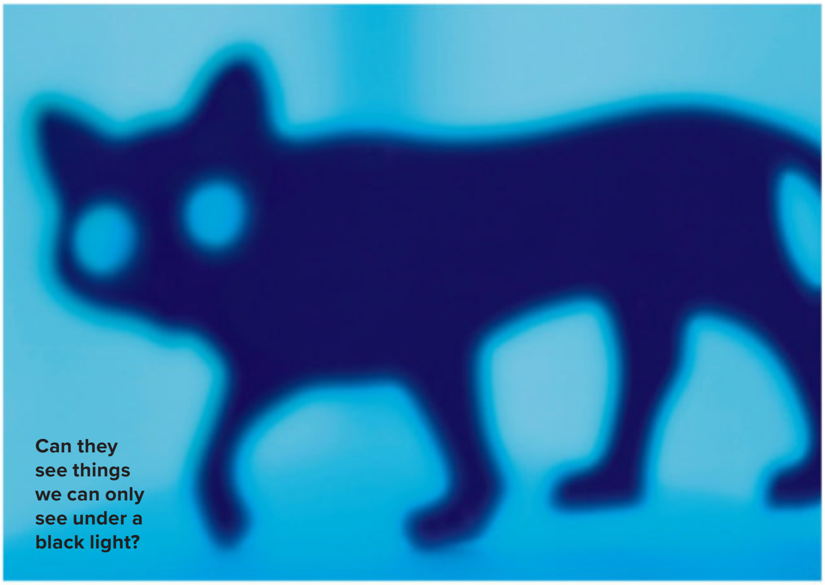
However, some provocative, albeit preliminary, research suggests that cats might naturally be able to see colors at the ultraviolet light end of the spectrum—the kind of deep, neonlike colors we usually can't see unless they're under a black light. To understand why that ability would benefit a cat, think of a white fox in the snow. For us the fox would fade away—we might not even see it. But because the hair on the fox and the snow reflect ultraviolet light differently, the fox might stand out very vividly to a cat. (Cats, incidentally, can see the fox moving better than we can. Although we have more cones in our eyes to distinguish different colors, they have many more rods, which help detect motion.)

To be sure, the research to this point does not prove that cats can see in the ultraviolet portion of the spectrum, despite a flurry of media reports a while back that made it sound like a fact. Tufts veterinary ophthalmologist Stephanie Pumphrey, DVM, points out that it has been shown only that the feline eye lens does not filter out the ultraviolet light that would allow a cat to see in the ultraviolet range. It's possible, she says, that such light gets filtered in a cat's cornea or some other tissue of the eye instead. And even if it doesn't, it still remains to be determined whether structures in a cat's eye called photopigments can actually absorb light in the ultraviolet spectrum.

That, too, would be needed for cats to be able to see in the ultraviolet range. Only future studies will tell. If it does turn out that cats can see in the ultraviolet range, that might be what some of their staring without blinking is about. It could be they are taking in things that have literally escaped our notice. After all, many things in nature have ultraviolet coloration—not just animals but also different varieties of plants.

Scientists knew a long time ago that nonmammalian animals such as birds, fish and insects could perceive a wider range of light—and therefore colors—than people. It would be a huge discovery if it were found that cats can naturally make use of ultraviolet light.

Reprinted with permission from *Catnip*, a publication from the Cummings School of Veterinary Medicine at Tufts University.



Can they see things we can only see under a black light?

DARKER

Night Vision

How cats see dusk to dawn.

Your cat is sure to be a more deft night prowler than you, but she still can't see in total darkness. Even a cat's eyes need at least some light. But cats can get by with six to eight times less light than humans can, due to a number of differences in the anatomy of their eyes.

You may have noticed that when your cat's pupil shrinks in brighter light, it has a kind of slit shape (unlike yours, which just becomes a smaller circle). This elliptical shape lets a cat's pupil expand much more than a human's round one, bringing in more light under dim conditions.

And that's just the start. The retina—the layer of cells on the inside of the eye that's sensitive to light—has two types of light-detecting cells: rods and cones. Cones work to distinguish colors, while rods respond to light intensity. Cats have between five and six times more rods than humans do, making them vastly more sensitive in low-light conditions.

Finally, there's that spooky glow cats' eyes get at night. That's part of their night-vision anatomy, too. The glow is produced by a special reflective layer of cells behind the retina called the "tapetum lucidum." This special layer bounces light back through the retina, giving the photoreceptor cells a second chance to detect it.

—*Robert K.J. Killheffer*

Because a cat is unable to distinguish reds from greens very well, consider buying your pet blue and yellow toys. They'll stand out better in his field of vision. (See "Give Your Pet a Gift" on page 88 for more ideas.)

CONNECTIONS

The Social Mind of Cats

They seek human society and true intimacy with us, but in a very feline way. **BY JILLIAN BLUME**

Cleopatra, my long-haired black cat, is trying to pull my hand off the keyboard of my computer so that I can pet her. She's tenacious, and when I keep typing, she simply climbs into my lap and puts her face into mine so that I can't see the computer screen. According to Cleo, it's time for a cat break.

Yet cats have retained a persistent mythology that they are independent and remote. They may appreciate their human opening a can of cat food, but they can just as easily bag a mouse or a bird if necessary. People often believe that cats are low-maintenance because they don't really need us.

Over the four decades that I've lived with cats, not one has been aloof. They have all consistently solicited affection. Leda, a tiny calico, loved to lie on my chest and spoon with me at night. Meeper followed me around and always wanted some part of her body to be touching mine. Harpo, my most neurotic cat, insisted on sleeping on my pillow, wrapped around my head like a hat. Fushie (short for Confucius), burrowed under the covers at night to sleep pressed against my side.

So why do so many people still believe that cats are not only low-maintenance, but as long as we feed them, they can take us or leave us?

Vanille Gavenko, owner of Cats of Sunshine in Brooklyn, New York, and a certified feline training and behavior specialist and animal Reiki practitioner, thinks that people may believe cats don't need humans because they don't know how to

There's a persistent mythology that cats are independent and remote. But they have a deep need for our love.

Kids love to cuddle with their cats. But it's important to ask them to proceed with caution lest kitty get startled or scared.

Cats and children both learn to socialize with other individuals during the earliest parts of their lives.

read cats' communicative language. For example, your cat's affectionate social moves may go unnoticed because they are very subtle. "A cat sitting next to you might be trying to tell you that they really like your company, but you might not notice that because you expect the cat to sit on your lap and be a purr machine."

Learning to understand your cat's behavior, vocalizations and body language is essential to a lifelong bond. And cats deserve it. After all, they developed their language of meows specifically to communicate with humans. Most cats skip the meowing with other cats. Their wild ancestors rarely encountered other felines, and when they did, they relied on their other senses. Cats communicate with cats by using their sense of smell and rubbing against or urinating on objects like trees. In that way, cats can avoid other cats but still leave olfactory messages.

But since the human nose doesn't measure up to the sniffing skills of felines, cats developed a language of meows to get their humans to listen—and give them what they want. While kittens will meow to get their mother's attention, adult cats only use vocalizations such as yowling and hissing to communicate with other cats.

One of the most remarkable facts about a cat's meow is that each cat develops his or her own language of meows to communicate with their specific human. And that makes it even more crucial for humans to learn the language of their own individual cats—even if you believe that your cat doesn't need you except at mealtime and to scoop their litter box.

MISUNDERSTOOD

Despite the fact that there are around 31,896,077 pet cats in the United States and roughly 370 million of them in the world, felines remain mysterious and misunderstood by so many. Part of that may be attributed to the essential biological nature of these engaging creatures.

Cats are territorial animals, and though female cats will live in groups in the wild, they are solitary hunters. "Cats are wired to be on their own and mind their business, but that doesn't mean that they don't enjoy or solicit humans' attention and interactions," says Gavenko.

> Felines who are attached to a human caregiver will choose that person over the offer of tasty snacks and treats.

Recently, scientists have undertaken the rather difficult task of investigating cats' social abilities in a research setting—and some cats have even cooperated! A recent study conducted by Kristyn Vitale and Monique Udell at Oregon State University noted that cats' social behavior changes with circumstance. Pet cats respond more to humans who show them some love, while shelter cats, like little salespeople trying to sell themselves, spend more time trying to communicate with unfamiliar and inattentive humans than they do with unfamiliar yet friendly humans.

"Felines might be seen as aloof because they are both hunter and prey, so they are always focused on their surroundings, and most of the time, their senses are on high alert," Gavenko explains. "It's just who they are. But when cat parents understand all these unique things about their cats, the most beautiful relationships happen."

> Dogs let their emotions ring out, but cats have subtle ways of expressing affection and showing you love.

DIFFERENT STROKES FOR DIFFERENT CATS

Genetics and environment shape a cat's personality and sociability, but a little independence can be a good thing, says Jennifer Van de Kieft, animal behaviorist and owner of Cat Advocate, a feline behavior solutions service in New York City. "I'm a proponent of a healthy mix, so the cat isn't so dependent on you, and when you go to work or on vacation, the cat has resilience," she says.

A cat's need for attention varies with the individual animal, genetics and their environment, says Van de Kieft. But their prime social development mostly occurs between 2 and 7 weeks of age, which is before they usually enter a human's life. Still, humans can add to a cat's socialization. "Playing with toys, even clicker training, is a great way to socialize a cat who maybe didn't have a lot of socialization before you got them. It feels like a language between you."

ALL THE RIGHT MOVES

Cats have a rich social language that humans can learn by listening and observing. "Cats communicate with us all the time," says Gavenko. "In fact, any behavior is simply their way to tell us something since they don't speak our language." While cats have developed the meow to communicate with humans, they also have learned to use their body language.

"Other very common ways our cats communicate with us are rubbing over our legs, as in saying, 'Hi,' and exposing their belly, a sign of trust and an invitation to play," says Gavenko. The better we can read our cats, the deeper our relationship with them becomes.

But some cat language is more complex than others. For example, just because a cat shows you their belly, it doesn't necessarily mean they want a belly rub. "This is a very common misconception that often leads to scratched fingers and a broken bond between a cat and their human." Even the affectionate Cleopatra will gently place her teeth on my hand if I'm taking advantage of her by rubbing her belly too long (despite the fact that she had pulled my hand over and placed it there).

Human affection can sometimes be overwhelming for cats, says Van de Kieft. "It's called petting induced aggression. Sometimes we're just a little too much for cats." Cats, she notes, like "high frequency interactions" where they will approach to say hello and see what you're doing, "but that doesn't necessarily mean that they want to be pet for an hour." A scratch under the chin may be good, but a body hug may be too much. Of course, there are cats that are only happy when they are in your arms, and some will even jump onto your shoulders if they don't feel they're getting enough attention. "It's a very individual thing."

"Cats probably will not enjoy a rough scratch like a dog would," and they might even hiss or scratch you, Gavenko says. "Which might give us the impression that cats don't like to be petted, but in reality, they just need a different approach. Cats are very specific about what parts of their body they will allow us to touch," and it varies from one cat to the next. "That's why I always suggest that my clients really get to know their cat" before too much contact takes place.

Even with a softy like Cleopatra, it pays to learn the language—or else suffer the scratches and bites of your frustrated feline friend.

Cats show camaraderie just by hanging out with you on the couch in front of the TV.

SIGNS

Understanding Your Kitty's Love Language

When your cat truly trusts you, these are the tells.

- **Bunting**
  Cats will sometimes bump their heads against your head or body to mark you with their scent. This is a sign of attachment and love.

- **Headbutting**
  In a form of bunting called headbutting, the cat will rub their cheeks on your cheeks, face and head. In this ultimate bonding behavior, you are now marked as someone they truly trust.

- **Licking**
  We all know that cats groom themselves and their newborn kittens with licking. But when a cat is especially close to a human companion, she will lick her too. Is your cat grooming you? You can take that as a sign of confidence and love.

- **Biting**
  While clawing and hissing are signs of attack, small bites are part of your cat's play repertoire, reserved for his closest friends.

For more on expressions of feline love, see stories on vocalizations (page 24) and body language (page 36). From purrs to slow blinks to whiskers bent forward, your cat has dozens of ways to say, "You rock."

Cat antics can feel extraterrestrial to us mere humans, but there is a method to this feline madness.

Many cats love water—they just don't like it when you forcibly bathe them or harshly scrub and dry.

BAFFLING BEHAVIORS

Stranger Things

Bad, mad or just crazy? Your pet may not be as inscrutable as you think. Researchers have explanations for many of the weird feline stunts we struggle to grasp. What they've learned could improve our relationships with cats and save their lives.

BY SHERRY BAKER

Talk to people who share their lives with felines, and odds are, they have tales about their kitties' funny, entertaining, worrisome and quirky behaviors. There are cats that love to play in water, watch TV and regularly "talk" to their humans—even telling their humans when to wake up and start the day.

Other odd behaviors like refusing to use a litter box, running down the hall screaming like they are being attacked by an invisible enemy, or consuming nonedibles like wool or gravel can cause worry and confusion for cat parents and sometimes baffle veterinarians, too.

The result can be unhappy relationships between cats and humans, including false assumptions about certain felines being "bad," "mad," "unfriendly" or even "crazy." And that can lead to failed cat adoptions and countless felines euthanized for many behaviors that could have been resolved if accurately diagnosed, according to Leticia Dantas, DVM, a board-certified animal behaviorist and assistant professor of veterinary medicine at the University of Georgia.

Here's the good news: Researchers have explanations for many (though not all) of cats' sometimes puzzling acts. What they've learned can help people understand kitties better and save feline lives.

PHYSICAL OR BEHAVIORAL?

"It's a huge and resistant myth that things observed in cats are either behavioral or medical," Dantas says. "The reality is that it is always both; you cannot separate the physiology of the body from the physiology of the brain."

An all too common example is litter box woes. When cats start

A cat who isn't feeling well may resist socializing with humans in his home.

urinating or defecating outside their litter box, despite everything owners do to try to solve the problem with different litter and scrupulous cleaning, there's too often an assumption cats are acting out, notes cat expert Drew Weigner, DVM, who founded the first feline specialty practice in the southeast, Atlanta-based The Cat Doctor, in 1987.

"People come in all the time to their vet and say, 'My cat won't use his litter box anymore because he hates me,' or 'My cat has gone crazy,'" Weigner says.

Of course, there are a host of physical reasons why cats may stop using their litter boxes—one common cause is a urinary tract infection, which is easily treated with antibiotics. But increased urination from diabetes can be another cause. So can kidney stones and even unrecognized arthritis, which makes getting in and out of a box painful to legs and litter painful to paws.

"However, it is not rare that a medical checkup to exclude a whole list of differential diagnoses is not done by the vet, or is declined by the client, because something in the cat's history has led the owner or the vet to believe the litter box problem is only behavioral," notes Dantas.

Sometimes, even if a physical problem is found and treated, a cat may avoid using the litter box. The litter box can be associated with being in pain while urinating or defecating, even if a medical problem has been successfully treated. Unfortunately, when cat owners don't understand the causes of the baffling behavior, they may end their pets' lives. "Very few issues lead to cat euthanasia as much as elimination issues do," says Dantas. (To see how to stop your kitty from kicking that litter, see "Kicking Litter," page 54.)

> Chronic pain isn't expressed through the classic "ouch" elicited by touch. Instead, it presents through a change in behavior.

NEUROLOGICAL PAIN

Another cause of strange behavior is pain. If a cat hurts, he doesn't want to be touched. A frightened, injured feline can scratch or bite if touched or picked up. And he will likely fear humans and continue to act afraid or aggressive, even when the pain is gone, Dantas explains.

Some pain, especially that caused by nerve damage, may not be obvious when a pet owner or even a vet conducts a physical exam because it is only felt when the cat is in a particular position or makes a specific movement. Instead of fearing touch, a cat with nonobvious neurological pain may react through changes in behavior—by not playing with toys or no longer jumping in boxes.

Understanding this is powerful, Dantas adds, because it allows educated cat owners to detect medical problems early and seek preventative care when only minor but puzzling behavioral changes are taking place.

MYSTERIES THAT REMAIN

There are still myriad baffling cat behavior issues awaiting explanations from scientists, including some very bizarre ones like hyperesthesia. People who witness this behavior report a cat sitting, looking perfectly normal until suddenly the animal's skin seems to crawl. It happens spontaneously, or can be caused if the cat is touched near its tail.

"A cat with this condition looks back at its tail like it's a demon, attacks their tail, screams and runs," Weigner says. "Some cats will damage their own tails and chew them until they bleed; one reportedly chewed off its own tail."

"We don't know what this is yet but there are theories—including that it might be some sort of motor seizures. And seizure medications do help some cats with the problem, but it may just be because the medications are sedating," he adds.

Capturing brain activity that signals the condition can be challenging. Some veterinarians will order an electroencephalogram (EEG), which requires attaching small electrodes to a cat's head and then trying to trigger an attack to catch the abnormality in action. But triggering an "attack" on cue has proven difficult. Cats refuse to stay hooked up to the machine and run when the "crawling" is triggered.

Other perplexing behaviors include cat eating disorders. One, dubbed "wool sucking behavior," is seen primarily in Siamese cats. Researchers don't know what causes the bizarre appetite in cats with the condition—but if the felines find wool material, they eat it compulsively. In fact, Weigner lost

Stressors like a new family dog or loud noises can cause your cat to pee on the floor.

This cat was having trouble walking to her litter box. Treatment for her arthritis should fix the problem.

Bizarre demeanors can emerge when your cat has an infection and fever, or an injury you can't see.

the sleeve of an alpaca sweater to a hungry feline when he left it on a sofa while eating dinner with friends.

Felines with pica disorder eat dirt, stool, ashes in a fireplace, almost anything. "We don't know what causes it but it is likely a sign of illness," Weigner says.

And that is another reason to assume your kitty who may be exhibiting odd behaviors needs to see a veterinarian ASAP.

HOW TO GET HELP

If your cat has a change of behavior, make an appointment with your feline's veterinarian to have medical causes ruled in or out. And Weigner advises making a list of any changes in your cat's environment to show the vet.

Have you moved? Added other pets or people to your home? It's also important to note what seems to be triggering a specific behavior. What happens right before your kitty does something odd?

Playing detective to learn about your cat's actions can lead to a surprise. For example, your cat might urinate on a window inside your home—seemingly totally bizarre behavior. But if you note that it happens at a window where birds or a squirrel can regularly be seen outside, you may have the trigger for your cat's odd conduct: stress at having to stay indoors.

"There aren't always triggers for behaviors but many times you'll note one—and finding a trigger is very important in behavioral diagnostics," says Weigner. "It is often necessary to seek professional guidance to come to a successful resolution of the many behavioral problems cats can have. Remember, you are emotionally involved and you aren't objective."

Get a recommendation for a certified animal behaviorist from your vet, he advises. They have specific, rigorous training and can often help you and your cat find solutions to behavior problems.

CAT PLANET

Blasts From the Past

Breaking vases, hiding in boxes, night yowling, kneading paws: Evolutionary instinct informs these notable feline acts.

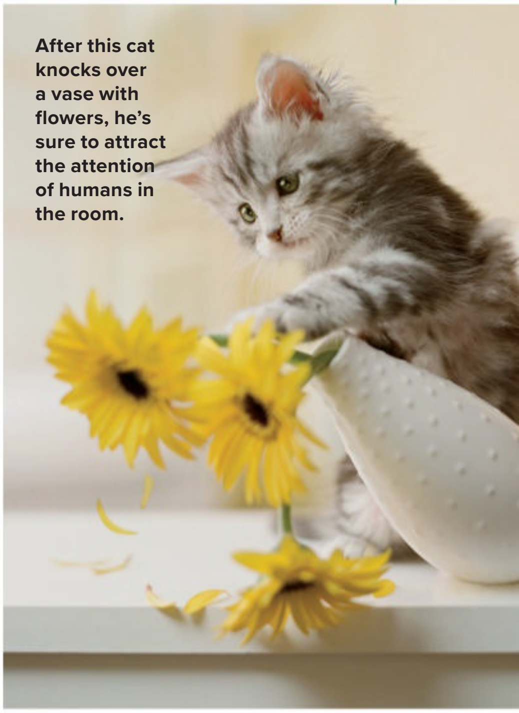
Many surprising cat behaviors have roots in evolution. Cats retain their ancient predator instincts, which explains their love of boxes that evoke small spaces in the wild. While their ancestors hid motionless in tall grass to catch prey, modern kitties like to hide in boxes to catch and play with balls and other toy "prey," according to Chicago vet Natalie Marks, DVM. Research shows that when rescue cats have boxes to hide in, they are calmer with lower levels of stress hormones.

Why do many cats have a propensity for pushing items (sometimes breakable ones) off tables and shelves—and often seem to enjoy watching the items drop? It's likely simply for attention, according to cat expert Drew Weigner. Maybe it's a type of kitty entertainment. After all, if you're nearby, you'll probably rush over to catch the object or pick up the mess on the floor while your pet watches the action from on high.

Does your grown cat "knead" on blankets or stuffed toys, opening and squeezing its paws like a nursing kitty? "Cats have glands in their paws around their claws that release a scent (pheromones) to mark their territory as a 'safe' location. This is typically a kitten behavior, but many adult cats continue to do it because it provides a sense of comfort," explains Weigner, who chairs the nonprofit EveryCat Health Foundation's scientific review committee, which supports cat health and behavior research.

Nocturnal vocalizations—the vet term for a cat's loud yowling at night—is fairly common. Does that mean your kitty is hungry so you'd better get up and prepare her meal? Serious hunger probably is not why your cat is doing that—instead she likely has you "trained," Weigner says.

If your pet likes to splash in water, that's not strange. It's a myth that cats fear water. Many like dipping their paws in water. What they don't like is being held and bathed, says Weigner, who reports his own cat likes to walk into the shower while it's in use.



After this cat knocks over a vase with flowers, he's sure to attract the attention of humans in the room.

KEEPING CLEAN

Kicking Litter

Why they create a bathroom mess, and what you can do about it.

BY SUSAN HAZEL AND JULIA HENNING

Despite being skilled predators, cats are also "mesopredators," meaning they are both predators and prey. Unlike apex predators at the top of the food chain with no natural predators, cats are in the middle, going after smaller animals and being preyed upon by larger ones.

Because they are also a prey animal, cats developed instinctive behaviors to protect them from nearby aggressors. One of these behaviors is digging in the litter tray. Cats likely dig and cover their waste to hide their presence from visiting predators, who might be attracted by the scent.

Covering waste may also help cats to avoid parasites.

Their waste also acts as an important communicator to other cats in the area, signaling how long ago a cat came through, a female that may be in heat, or many other messages a cat could leave behind.

This all brings us to what you can do so your cat isn't kicking litter all over the place.

In terms of changing the cat's behavior, the short answer is: nothing. Digging is a natural and important act and trying to interrupt that may cause stress and confusion for your pet.

In fact, cats who dig in their litter box for longer probably like their litter box more and are less likely to have problems with pooping or peeing. Inappropriate pooping or peeing, especially outside the litter tray, can indicate urinary problems in cats. In a survey of Australian cats, around 20% eliminated their waste outside the litter tray.

Some simple solutions in setting up litter trays can keep both you and your cat happy—and litter neatly in the tray.

1 Mind Litter Hygiene (Yours, Not Theirs)

Have you ever had to pull a gross bit of food from the sink? Your cat may feel similarly about placing their paws in a dirty litter box.

Litter isn't just a product—it has a profound emotional impact on your cat.

Your pet's hesitance to use their dirty litter tray may be leading them to hedge their bets, sticking to the edge, where the litter is less soaked, and kicking litter all over the floor.

The solution: Clean the tray regularly. Ideally, remove solid waste as it happens or once a day, and completely change the litter every few days or before the top layer becomes soaked.

2

Remember: Less Is More

When it comes to filling the litter tray, more isn't always better.

For cats with health issues such as arthritis, pain or restricted mobility, an overfilled litter box means trying to balance on an unstable mound of litter. And the more litter in the tray, the more litter that can end up on the floor.

Even cats without health issues may feel the need to dig deeper to find a stable surface to squat on. This means more litter on the floor both because of the increased volume and the cat's extra efforts in digging.

The solution: Fill the tray with around 1 to 2 inches of litter.

3

Provide a Choice

The general rule of thumb is one litter tray per cat plus one for the household. These should be placed around the house if possible, in places where your cats feel safe to go about their business.

Many litter boxes are too small. If your cat is constantly kicking litter around, try investing in a larger box. A covered litter box may be a solution, but cats are individuals too and some don't like being cooped up when trying to poop or pee.

You can find trays with higher sides or an additional edge that hangs over and stops some of the litter from flying.

If you can't find something large enough or suitable, you can try making your own from something as simple as a plastic washing tub.

A great way to work out which type of litter box your cat prefers is to place two different types side by side and see which one they use the most.

4

Wipe Your Paws

If it's not any of the above, it's possible your cat just has a real zest for kicking up litter.

If the mess on the floor is a real problem for you, you can place specific mats around the litter or in the doorways to the rooms where the litter is.

These mats help to collect the litter as the cat walks over them, containing that kicked-up mess to a smaller area and stopping litter from being tracked into other rooms.

Toileting outside the litter box may indicate a behavioral or medical problem. If making the changes suggested above doesn't help, do consult your veterinarian.

If your cat is squatting frequently without much result, you should consult your veterinarian as quickly as possible.

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BETTER TOGETHER

The idea of the loner cat has been soundly debunked. It turns out that your pet needs you for play, enrichment and companionship for life.

PLAYBOOK

5 Ways to Touch (or Not Touch) a Cat

Felines prefer to choose when and where you stroke them. To navigate this territory, you need to know what yours likes.

It's a common scenario: You're petting your cat with great affection when all of a sudden she turns on you, hissing, even scratching. Other times cats just tolerate stroking for treats and toys, but stress levels increase. The fact is that while our cats need our love, and some genuinely enjoy being stroked by their human guardians, others can tolerate only so much physical intimacy before they rebel. So how should we pet a cat, and where do we draw the line?

1 Allow Your Pet to Initiate a Physical Encounter

For actions like stroking his fur, it's best to let your kitty come to you, a study from the University of Zurich suggests. Writing in *The Conversation*, visiting research fellow and animal behavior expert Lauren Finka of Nottingham Trent University, England, notes, "As a general guide, most friendly cats

A cat's belly can feel like a siren call to rub: Don't do it for more than a few seconds before giving that kitty a break.

will enjoy being touched around the regions where their facial glands are located, including the base of their ears, under their chin and around their cheeks. These places are usually preferred over areas such as their tummy, back and base of their tail." Also: Beware of an exposed stomach, which may lure you into excessive petting. Even after inviting you in, a cat may find that stimulation difficult to bear if it goes on. It's wise to keep those petting sessions short.

When it comes to touching humans, many cats like to keep it brief.

2 Give Your Cat a High Five

This short and sweet sign of affection may be perfect for your pet. To teach kitty the technique, show her a treat and then put it between your middle and ring fingers, palm up in a high five. When she tries to reach for it with her paw, give her the treat. Repeat four or five times, saying, "High five," each time. Eventually she will react to the gesture and wording, no treat required.

3 Expose Them to Baths

Most cats like to groom themselves, but every once in a while, when something greasy or sticky clings to fur, you need to provide a bath where the level of touching can be intense. To make this tolerable, experts recommend giving your cat baths from kittenhood on, just to accustom them to the ritual. Make sure your cat's nails have been trimmed. Then, for the bath itself, take it slow: Softly spray or sponge water on the entire body—not too hot or too cold, but comfortable and warm. Use only a washcloth for the areas around eyes and ears. Avoiding eyes and ears, use a cat shampoo. Work up that lather and gently rinse it off. Towel dry, or use a blow-dryer set on warm. Now—after all this intense touching—give that cat some space!

This hooked tail shows how thoroughly this cat loves being stroked on top of his head.

4 Read the Signs

To know when your cat is genuinely enjoying the contact, says Finka, look for an upright or gently waving tail, purring, kneading you with their front paws and gentle nudges that feel like the cat is saying, "Go on."

5 Use Caution Around the Feet

Our feline friends can be persnickity about having their feet touched. It's best to avoid this area on any cat you're not extremely familiar with. And even if it's your own pet, proceed carefully. Offer up a gentle pet or two in the direction in which that cat's fur flows. Stop immediately if he hisses, flattens his ears or moves away from you.

Some cats may enjoy the soft flow of a hand-held shower more than a sponge bath, especially if the water is warm.

Looking for a good cuddler? Ragdoll (left) and Ragamuffin breeds will be your best bets.

HOME ALONE

Missing You

The post-pandemic era has revealed a new feline reality: They can have separation anxiety, just like a child.

BY JILLIAN BLUME

Your comings and goings can unsettle your cat, so it's best to be low-key about leaving home.

Many people may be unhappy about returning to offices since lockdown has lifted, and cats want us to know they're not thrilled either. Social media postings of photos and videos documenting cats' destructive behavior resulting from separation anxiety is shattering the myth of the aloof cat who has no need for their human beyond waiter service.

"We're seeing it a lot now because so many cats are COVID cats," says Jennifer Van de Kieft, animal behaviorist and owner of Cat Advocate, a feline behavior solutions service based in New York City. Typically, shortly after adoption by humans, cats are left

This cat may be alone for the day, but feels comforted by the sounds of a human TV show drifting in from another room.

alone. Even if their humans work at home, they frequently leave their house. But “COVID cats” are used to being around their people 24/7—and now that’s changing.

> If you provide affection, treats and playtime every moment you’re home, it could leave your cat too dependent on you.

“Cats are really schedule- and routine-oriented,” Van de Kieft explains. “They don’t like change.” If their human suddenly goes off to work and the cat is alone for eight or 10 hours, “the cat’s world is thrown upside down because they don’t understand.” Of course, cats are individuals and some handle change better than others. While one may be slightly unsure, and then spend the day snoozing, another can have a more extreme reaction.

However, separation anxiety in cats is “poorly defined and poorly understood,” says vet expert Jo Myers, DVM, at justanswer.com. The evidence is so scarce that Myers points to a 20-year-old report representing the best empirical evidence to date. That study, conducted by veterinary behaviorist Stefanie Schwartz, evaluated 136 pet cats in home visits over a decade, charting the behavior problems triggered by separation anxiety. Significantly, the study concluded that cats are not generally aloof, independent creatures. “The appearance of separation-related distress can be viewed as a defining criterion of sociability,” Schwartz wrote in that study. “Without social bonding, separation anxiety would not exist.”

A SERIOUS PROBLEM

Myers emphasizes that separation anxiety is a medical disorder, “an

When your cat exhibits destructive behavior, it's not to spite you; it's the result of uncertainty and frustration.

actual diagnosis, reserved for pets who experience severe symptoms that damage property, cause self-injury or otherwise significantly impact their quality of life. Separation anxiety is not a choice or something you can train away. It doesn't apply to cats who are demonstrating normal, voluntary behaviors" in an attempt to manipulate their human companions.

The root of separation anxiety is a cat's dependence on their human, adds Vanille Gavenko, owner of Cats of Sunshine in Brooklyn, New York, and a certified feline training and behavior specialist. It's a manifestation, however negative, that cats do indeed become attached to their caretakers. That dependence goes awry when, in the absence of their human, "a cat doesn't know what to do."

So what makes one cat susceptible to separation anxiety and another resistant? Cats who have suffered environmental and developmental hardships, such as kittens that are orphaned or weaned too soon, for instance, are at heightened risk. Genetics may also play a part. According to behaviorists and researchers, symptoms of separation anxiety in cats manifest most frequently as destructive behavior. Other signs include inappropriate urination, excessive vocalization, depression, aggressiveness and agitation. Myers notes that excessive grooming and even injury is possible, generally in the course of property destruction during the cat's panicked attempts at escaping.

GIVEAWAYS

Signs & Symptoms of Separation Anxiety

If your feline exhibits some of these traits, she may need treatment.

- **Excessive Vocalization** This includes meowing, yowling, caterwauling, crying or moaning.
- **Elimination Outside the Litter Box** Distressed cats will urinate in inappropriate places.
- **Excessive Self-Grooming** Cats will lick themselves until their skin is irritated and bald or hot spots form.
- **Destructive Behavior** This includes chewing, ripping and scratching furniture and even walls, knocking over and breaking objects, and tearing up things like pillows and cat beds.
- **Trying to Escape** Your pet will often injure themselves trying to get out of a window or door, and they will try to slip out the door when you open it to leave.
- **Change in Eating Habits** They will either eat more than usual or stop eating.
- **Overexcitement Upon Your Return Home** This includes excessive clinginess and not letting you out of sight.

Unfortunately, behavioral problems like these are the main cause of cats ending up in shelters. It takes a lot of patience, consistency and even medical intervention to help a cat with separation anxiety, and many people are not up for the task—or don't know how to help.

"This is a legit medical condition that causes suffering and warrants treatment every day," says Myers. And, she adds, it doesn't matter if you're away for a few hours or for a long vacation. The cat still experiences the same panic.

I went through a harrowing episode with my cat, Harpo, who was trapped in my apartment overlooking the World Trade Center in the week following the attack in 2001. Afterward, whenever I left the house, even just to go get the mail, he would deliberately urinate in anything that resembled luggage. He ruined backpacks and briefcases and tote bags. He didn't do it because he was angry, but because he was terrified that I wouldn't be coming back.

Sometimes less traumatic provocations, even something as seemingly benign as boredom, can put a cat at risk. In those cases, solutions as straightforward as environmental enrichment and mental stimulation can help, Gavenko states. "The more we can boost their confidence and provide exciting and rewarding things to do that don't include us, the less anxious and happier our cats will be." Other times, symptoms just mimic separation anxiety; natural cat behavior like scavenging, exploratory play and chewing can sometimes be misinterpreted by humans. And cats can have another diagnosable but treatable issue; obsessive-compulsive disorders come to mind, along with true physical illness or injury.

When I took Harpo to our veterinarian, he did a complete examination and determined that the cause was psychological. Harpo was in panic mode; by urinating, he was making a statement by destroying objects he perceived as helping me leave, and he was marking my gear. Perhaps he was hoping I would pack *him* the next time I left. Classic separation anxiety was the diagnosis. We had to recognize it for what it was before Harpo could be helped in a real way.

TO THE RESCUE

Ultimately, Harpo had to be treated with medication. TLC just didn't cut it. My veterinarian prescribed an antidepressant that alleviates anxiety in cats. Harpo took his "happy pill" willingly every morning and stopped urinating anywhere except in his litter box. After six months, I tried tapering him off the drug—and he unfortunately went back to peeing in my gym bag. He ended up being on the medication for the rest of his life, which was a long and happy one.

Several training methods can also help cats with separation anxiety. For some, desensitization and counterconditioning help. Desensitization is a process using repeated exposure to the stimulus that causes fear or other undesirable emotional responses. Counterconditioning works by replacing a negative response with a positive one.

For desensitization training, start with very short absences. Walk out your door for a few seconds before returning. Try to time your absences to the amount of time it takes for your cat to become upset. A good way to determine this is by using a pet camera. Gradually extend your absence by seconds. As you reach longer times before the cat becomes anxious, use treats or toys as a reward when you return. Eventually, the cat may associate your leaving with positive experiences.

If you know that you will be returning to the office soon, start leaving your house for short and then longer periods of time, says Van de Kieft. "Every time, leave something fun for your cat, like treats and a puzzle feeder." Buy some "special" toys that only come out when you're leaving. That gives your cat something to look forward to when alone. Just be sure whatever toys you leave are safe for solo play.

As I learned with Harpo, when the condition is severe, prescription medication may be necessary. This includes drugs like Reconcile (a veterinary-branded version of fluoxetine, the generic of Prozac), Buspirone, Paroxetine (Paxil), Clomicalm and others. These drugs should only be given under veterinary supervision—never try to treat your cat with human drugs!

Natural supplements to treat anxiety, such as CBD, are a contentious subject in the veterinary community. "As a licensed medical professional, I am obligated to tell pet parents that—in spite of all the hype—we do not yet know enough about CBD to recommend it," says Myers. "Studies demonstrating any efficacy of CBD for separation anxiety have not been carried out." CBD is also unregulated, she notes, which means there is no quality control.

> Don't get a second cat to keep your first one company when you're gone. That may just add to the anxiety.

Providing waste paper or other items you don't mind having destroyed can both give your cat stimulation and reduce his anxiety.

Despite this, pet parents have reported some success using CBD for anxiety. However, the only "natural" supplement that Myers recommends is Vetoquinol Zylkene calming supplements for cats. Speak with your veterinarian before administering any natural medication or environmental pheromone therapy.

"Separation anxiety is not a simple problem, and there are no simple solutions," says Myers. "Talk to a vet or arrange a consultation with a board-certified veterinarian to determine if this actually is separation anxiety and what the best treatment strategy may be."

You are unlikely to contract the toxoplasmosis parasite by nuzzling with your cat.

UNDER THE INFLUENCE

Is Your Kitty Controlling Your Mind?

Your pet can transmit the toxoplasmosis infection to you, making you sick. But there's more: After exposure, the microbe puts human and cat brains in sync.

BY KATJA PETTINEN

The human body is a universe of its own. While the exact numbers are up for debate, we know for a fact that inside each of us are the cells of other organisms. Current estimates put this ratio at 1-to-1, meaning that for every human cell inside us, there is an equal number of nonhuman cells. As microbiologist Joseph Osmundson, PhD, says, "Our world is built of things we can't see."

These nonhuman cells are microbes, including bacteria and parasites—organisms that live off other organisms. One such parasite, *Toxoplasma gondii*, infects some 40 million Americans, or 11% of the population in the United States at any given time. In some regions of the world, the rate of infection is up to 90%. "Toxo" has traveled the globe widely for a long time, and is most prevalent among those eating rare meats or unwashed vegetables, and those who live with cats.

Cat bodies are an easy resting spot in the life cycle of Toxo, perhaps because cats are not severely impacted by the infection themselves. For humans too, long-term impacts of Toxo are tough to figure out because, in the beginning, symptoms, if any,

If your cat goes outdoors, it's possible that Toxo has infiltrated urine and fecal matter in kitty litter back home. So consider masking when cleaning litter out.

look like the common cold. By the time significant illness results, the source could be gone.

CALL OF THE CAT SIREN

Researchers are concerned about the physical impact of the infection on human health, of course, but they've recently begun investigating the impact the parasite can have on human behaviors and minds. Can a microscopic being too small to see with the human eye alter our behavior? The short answer is: absolutely.

The first hint emerged 20 years ago, when exotic disease researcher Joanne Webster of Imperial College London showed that the parasite could alter rat brains; infected rats literally lost their innate, very healthy fear of cats and instead developed a "fatal attraction" for the lethal felines designed to hunt and eat them. Since that time, other studies have backed up this dramatic finding in rats and also in mice. Bizarrely, Toxo-infected rodent brains undergo a change, while still functioning normally in all other aspects. Scientists have gotten to the root of it: Rodent brains were changed so that cat urine served as a siren call, making the rodents far more likely to end up in a cat's stomach.

> Toxoplasmosis changes the neurochemistry of the mammalian brain to seek contact with cats, big and small.

And this is precisely what the parasite wants. In order to keep its own life cycle going, Toxo needs to spread itself by getting safely inside new kitty hosts; this way, it can make more copies of itself. Even microbes long for their happy places.

HAPPY PLACE

As it turns out, Toxo is a master of happiness because it can modify production of the neurotransmitter dopamine, associated with feelings of reward and well-being in mammalian brains. "Toxo has this one gene that allows it to plug into a whole world of mammalian reward systems," the biologist Robert Sapolsky, PhD, has said.

The problem is that feeling happy about the jaws of death is hardly a good thing! And the phenomenon isn't limited to rodents. In 2015, European scientists showed that Toxo-infected chimpanzees have a lessened fear of leopards (of leopard urine, to be specific). Those large felines in turn enjoy feasting on chimp meat, allowing the parasite to get inside another belly where it can flourish and multiply. If Toxo has cracked the code on chimp neurology, it's safe to assume that it knows how to hack the human brain as well. Indeed, because chimpanzees are our evolutionarily closest living relatives, the findings suggest that Toxo-infected humans are lured by feline urine, too.

Some scientists think that during our own species' evolution, Toxo has been using humans much as it does rodents: to advance its own

18+

WHAT IS
AVAXHOME?

When pregnant, have someone else in the family change the kitty litter if you possibly can.

Pregnant women should be especially careful around an infected cat; toxoplasmosis can damage the developing nervous system of an unborn child.

life cycle. While modern humans are not commonly eaten by large cat predators (such as leopards, lions, jaguars and the like), if we travel back just a few million years, this scenario did indeed play out. Somewhere in its own past, Toxo learned how to toggle off the innate fear of being eaten inside rodents and inside us as well—all in the name of getting back to its own happy place.

Meanwhile, Czech parasitologist Jaroslav Flegr, PhD, author of the book *Frozen Evolution*, now sees this toggled-off fear playing out in modern times. Examples include those more willing than average people to engage in highly risky behavior, from skydiving to BASE jumping to mountain climbing. Flegr is a carrier of the Toxo parasite himself, and he observed that he also has a lessened aversion to risk and danger.

To make this understanding more systematic and scientific, his lab at Charles University in Prague has produced impressive empirical data about Toxo in the brain and the kinds of impact that this parasite can have on humans. The researchers report that while long-term Toxo infection produces tiny cysts in all mammalian brains, including humans, the cysts don't impact all people the same way. Depending on the way a given person reacts, though, presence of the cysts has been associated with increased risk of traffic accidents, slower reaction times and, of course, less aversion to the smell of cat urine.

So, if you are a truly devoted cat person, does this mean that you're infected by Toxo? Not at all. But there is a good chance that this tiny parasite has nudged our nervous systems toward a heightened connection with kitties. This is not something that the parasite itself actually cares about—your love of cats does not advance the spread of Toxo. But it just might be one of the fascinating side effects of this rather ingenious little bug, tapping into the nervous systems of so many species and influencing our minds.

At the end of the day, yes, there is some cause for concern, and it is worth keeping in mind some of the best practices for minimizing the spread of Toxo (see sidebar). But there is also room for curiosity, even wonder, toward all the complex ways that life-forms, tiny and invisible as they are, can do so many powerful things in the world. We might even contemplate the profound intelligence that microbes and other life-forms portray. Maybe humans aren't the only smart ones around, even if the name we have given ourselves, *Homo sapiens*, for "wise man," suggests we think that we are.

This much we know for sure: The world as we know it would not exist without microbes. As species, they need us, and we also need them, even if they come with side effects that can shape our behavior, like driving too fast or thinking that cat pee just isn't so bad. One of those things we might want to control, and we indeed can; the other one could actually be a balm for someone living with and loving cats.

> A cat with toxoplasmosis eliminates infectious particles capable of spreading through the air.

DEFENSE

Self-Protection

What you can do to lessen the spread.

Not all cats carry Toxo. Basically, if your kitty is always indoors, she is unlikely to be infected.

If your kitty does roam the streets, your main risk of getting infected is through tiny particles in cat poop. When the parasite multiplies inside a cat's stomach, it produces robust cells called oocysts, which come out in the cat's feces. These oocysts are invisible to the human eye, just like bacteria and viruses. But they are very good at spreading out as tiny particles you might inhale whenever feces gets touched or disturbed.

Here's the really important point: Those oocysts can stay alive for months, even years, within the environment, including within water. So it's crucial not to flush kitty poop down the toilet. Otherwise, the parasite gets right back into circulation, through the seafoods that we eat.

If you properly dispose of kitty poop—do it daily and don't flush it—you're unlikely to get the parasite from your cat. The most common route for how humans get infected is by eating rare meats or unwashed veggies (it's also best not to feed your cat raw meat).

The important sidenote is for pregnant women, who must be especially cautious: Infected kitty poop can harm the fetus in the womb.

EMPOWER

Free Them

Why cats need more control over their lives. **BY JESSICA PIERCE**

People who live with cats often joke about being at their beck and call. We may pretend to be in control, but ultimately it is the bossy kitty who really calls the shots. This humorous stereotype of cats as the ultimate power brokers has a ring of truth, perhaps because of the dignified way in which cats carry themselves, their self-possession and confidence, and their seeming indifference to our requests. Yet these jokes can obscure the fact that our cats may actually feel a distinct lack of control over their environment and their daily experiences.

In her deepest heart, your cat wants to be the master of her world.

GIVE HER AGENCY

The single most significant problem facing homed cats right now is lack of agency—the ability to make choices for oneself and feel in control over what is happening to you. Cats living as pets have very little control over their sensory environment, their social interactions and the basic elements of daily survival, all of which are orchestrated by human guardians. They rarely get to choose their home, nor can they decide to leave if they are unhappy; they cannot choose their family or friends or mates; nor do they have many options about what to eat or when, or even where they can eliminate.

Loss of agency occurs in various small but significant ways throughout the day—for example, the hindering of cats' free movement, unwanted and invasive touching by humans, and the suppression of natural feline behaviors such as scratching or hunting.

Having a sense of control over one's environment is fundamental to psychological integrity. This is as true for humans as it is for other animals, including cats. As veterinarian Franklin McMillan, DVM, explains in the first ever textbook devoted to animal mental health, *Mental Health and Well-Being in Animals*, a vast body of research on human and nonhuman animals has established that control over one's life circumstances, especially over unpleasant events or stimuli, strongly predicts positive feelings and mental well-being.

When faced with an annoying or painful stimulus, an animal can experience feelings from discomfort to anxiety to panic and fear. Your cat will want to escape, but can she? The ability to move away from that stressor, or at least to lower its intensity or duration, makes the experience more tolerable to your cat; conversely, feeling out of control under such circumstances increases the stress response and the pain and panic that results.

McMillan cites a series of experiments with captive rodents that found that the animals will exercise control over their environment virtually any chance they get and seem to find it intrinsically rewarding.

The takeaway is that if our cats feel like they don't have control over what happens to them, especially if they lack control over things in their environment that they might find scary or unpleasant, they may experience negative feelings. On the flip side, a simple way to increase our feline friends' happiness is to make sure they *do* feel in control, as much as possible, and that they *can* make choices.

> A lack of agency has significant fallout for both a cat's psychological and physical well-being.

POWERFUL BENEFITS

Empowering cats is good for them in direct ways: Not only might they make different and better choices for themselves than we might make for them, leading to longer, healthier lives, the process of making and implementing choices also improves their sense of satisfaction and well-being by giving them control over their experience of the world. A cat

When it comes to physical contact with human family members, cats like to make the first move.

Cats love the freedom to climb from the floor up to the highest perch in the place that they live.

This lucky cat is given a choice of entrees at every meal.

with greater agency is a happier cat. Moreover, the very process of sorting through options and making choices provides cats with the opportunity to learn and sharpen their cognitive skills.

Empowering cats is also good in indirect ways, because it reminds us that our cats are individual beings with intrinsic value. Respecting cats' interests in making choices is a way of acknowledging and respecting their value as individuals. It also goes some small way toward redressing power asymmetries in human-animal relations.

Agency, control and choice are very much on the minds of thoughtful cat guardians. When I talk to people who live with cats and try their best to give their pets a good and happy life, I am constantly inspired by the myriad ways in which they try to make space for their companion to express opinions and collaborate on decisions about their days and lives.

The first step in enhancing your cat's agency is becoming more mindful of the ways in which control can be constrained in our human homes. The second step, of course, is to create or embrace opportunities for choice whenever they arise.

Jessica Pierce is a bioethicist and faculty affiliate with the Center for Bioethics and Humanities at the University of Colorado Anschutz Medical Campus.

CHECKLIST

Here's How to Give Your Pet a Choice

Offering litter and food options or the chance to simply walk away from you are just a few ways to nurture your kitty's sense of agency.

There are a few ways to make more space for feline agency in your home. Each of these requires that we listen actively to our cats and pay attention to body language, facial expression and vocal communications. You can probably think of many more things to add to this list.

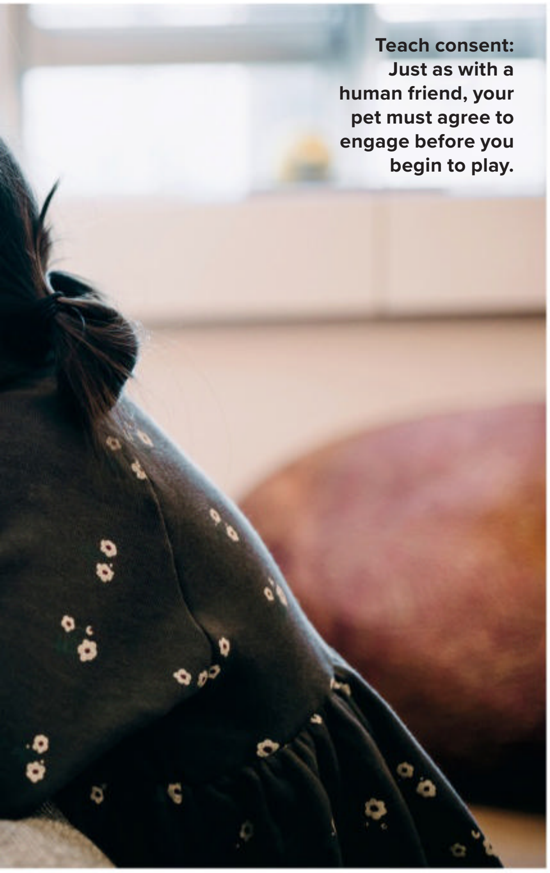
- **Let Your Cat Pick His Litter Substance and Location**

If you google "cat's choice," you'll bring up advertisements for kitty litter. This is a narrow take on cat agency, but let's start here. You might, in fact, give your cat a choice of different litter substrates, to see which he prefers. Let him pick. Also, providing more than one litter box in more than one location in the house will give your cat alternatives about where he'd prefer to do his business on any given day. Don't get mad at your cat for scratching the litter

after pooping, even if it means little pieces of clay spread over your floor like confetti after a party—this is a normal behavior, likely related to spreading their scent and telling other cats, “Milo was here.”

- **Expand Food and Feeding-Related Selections**

Let your cat try a variety of foods—wet, dry, different flavors, textures, temperatures; try bowls or plates of different shapes, textures, materials; try feeding in various locations and at different times of the day. See what preferences your cat has. Offer several different water sources for your cat—maybe a bowl in the kitchen and a kitty fountain in the hallway.



Teach consent: Just as with a human friend, your pet must agree to engage before you begin to play.

- **Provide Your Kitty as Much Spatial Choice as Possible**

Give access to as much space as allowed within the house. Avoid confining a cat in a small area like a bathroom or bedroom, unless it’s a temporary way to protect the cat (e.g., from a visiting dog). Access to safe outside spaces (catios, fenced yards) can expand your pet’s spatial choices. A cat door into an enclosed area is a freedom-enhancer, since the cat can decide when to be outside and when to come in.

- **Always Ask for Consent Before Petting or Picking Up a Cat**

Be open to having a cat say, “No, thanks,” whether by walking away or stiffening their posture. The easiest way to ask consent is to let a cat approach you and initiate a social interaction. Watch their body language for signs of pleasure or annoyance. Stop petting here and there and see if the cat will ask you to continue. It is especially important to protect felines from unwanted touching by children, who may not yet have the fine motor control to hold or pet a cat gently and whose jerky movements might make your kitty edgy.

- **Protect Your Pet From Scary or Inescapable Situations**

Some social interactions and experiences can be frightening for your kitty (hugs from an excited child, attention from a super-friendly dog). A cat should be able to control when, how closely and with whom they interact. And every cat should have a safe space that is all their own—whether this is under the bed, in a special cat cave or on top of the bookshelf—where they can choose to withdraw from social interactions.

- **Play With Your Cat Often and With Imagination**

Challenge yourself to engage your cat in the full behavioral sequence of hunting (spot, stalk, pounce, catch, “kill”) by using wands, stuffed mice, string, balls, crumpled paper or whatever else strikes your cat’s fancy. See what kinds of play your cat picks most consistently and then follow her lead.

- **Try to Remain Observant**

Notice how your cat responds to stimuli in the home and use your observations to make cat-centric choices. If there are noises, sounds or smells that your pet obviously dislikes, perhaps you can find ways to remove them or give your cat somewhere she can go to get away from these exposures.

- **Give Your Furry Friend the Option to Walk Away**

When you are engaged in a training session with your cat, let him have the chance to leave the situation at any point. He might be uncomfortable, bored or simply sleepy and ready to take a nap in that lovely beam of sun shining on the floor.

- **Accept “No” as an Answer**

Always accept when your cat is telling you, “No,” unless their safety is at risk.

And finally...

- **Be Open to Inquiries From Your Cat**

Can I please taste that? What do you have in the bag—can I see?? Can I go in there pleeease? All in all, paying attention to feline agency will make us better guardians to our furry friends and will increase our cat’s happiness quotient. This, in turn, should make us happy, too.

HOW TO HELP YOUR PET THRIVE

The little things will lift your kitty's quality of life. Not just a warm place to live and healthy food, but also enriching toys, joyrides and plenty of places to hide.

PLAYBOOK

5 Ways to Boost Your Cat's Health

Improve their standard of living with these helpful day-to-day wellness tips.

The internet is filled with tips for pet well-being and health, but a lot of important information can slip between the cracks. Here, we share some great tricks that can be especially useful but remain little known.

1 Treat the Sniffles

Cats come down with colds just like you do. A few days of sniffles are no big deal. But if cold- or flu-like symptoms persist for a week or more it is time to get your cat to the vet for some care. Red flags include green and yellow mucus or the discharge of blood, signs of viral or bacterial ills in need of antivirals or antibiotics, or symptom control.

Influenza can turn into pneumonia in your cat, so be sure to take her to the vet if symptoms go on and on.

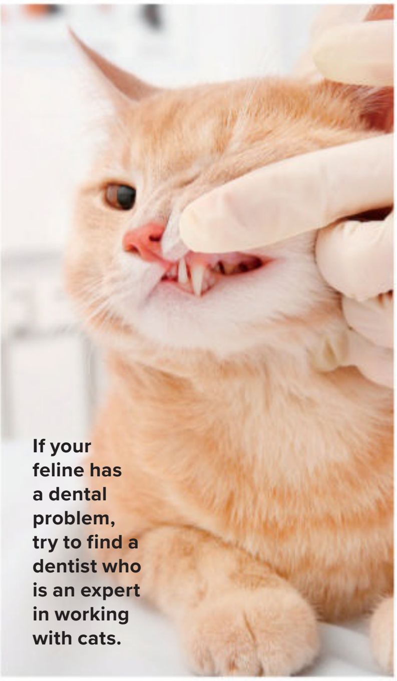
Never punish your cat for excessive grooming. Instead, do all you can to lower his level of stress.

2 Watch Out for Overgrooming

All cats groom themselves, but sometimes it seems excessive, and that could be a sign that something is medically wrong. If your cat spends more than 50% of his time grooming himself, visit the vet to check for allergies, infections, pain or a neurological disorder characterized by extreme sensitivity to touch. In addition to excessive time, overgrooming can be signaled by missing patches of hair, changes in the color of fur or overexertion when licking takes place. In any of these situations, experts recommend a trip to the vet.

3 Take Care of Your Pet's Teeth

Our cats aren't prone to cavities, but that doesn't mean dental care can be ignored. One painful problem results when cats literally reabsorb their teeth, an increasingly common condition associated with a surplus of vitamin D. You may notice the phenomenon as an indentation of the bone that grows in size over time. At first notice of this painful problem get your cat to the vet so the tooth can be removed—your house cat does not need that tooth to eat.


If your feline has a dental problem, try to find a dentist who is an expert in working with cats.

Experts say they can see pain in a cat's face, but it's hard for most of us to detect.

4 Don't Let Pain Persist

We've become wary of treating pain because prescription opioids have created an epidemic of human addiction and a trail of death across the United States. But the fact is that undertreating pain, in humans and in cats, can forge neural pathways in body and brain that, if left alone, can pulsate with pain for life. That is why if your pet seems to be in pain, addressing it fast is the only appropriate course. Get to the vet, and don't worry about your cat becoming an addict. A new generation of veterinary protocols, geared to cats only, can manage your kitty's pain before it gets out of hand.

5 Feed Your Indoor Kitty Once a Day

Your companion might seem hungry all the time, but a Canadian study shows that indoor cats stay healthiest if you feed them just once a day. Feeding your cat once a day not only reduces that hunger, according to researchers at the University of Guelph, it also lowers risk of obesity.

This cat feasts once a day to stay at her fighting weight.

This cat is headed abroad. She'll need to document her vaccine status just like her human family. She'll need a microchip, too.

When you plan a trip with your pet, remember that she has travel needs and requirements of her own.

ON THE MOVE

Travels With Your Kitty

Whether you're hopping on a flight or packing the car, here's how to make the trip easier for you *and* your feline.

BY JANELLE LEESON

When seeking the ideal traveling companion, your cat won't be the first individual who comes to mind. But traveling without their newest family member was out of the question for Vancouver, British Columbia, residents Geraldine and Patrick Buchanan.

"She was so young and had just bonded with us," Geraldine says of their white and tabby cat Mac. "We couldn't face leaving her in someone else's care this early on. She has joined us on every trip ever since." Mac was 3 months old when she boarded her first airplane. Today, the adventure cat has been on 12 intercontinental flights totaling over 100 hours of time in the air.

Not all felines get to climb mountains and paw around the lakes of British Columbia like Mac does when she's not traveling, but you might find that you need to fly with your cat or ride in the car to visit the vet. When the time comes, traveling with your kitty can be difficult—but it doesn't have to be.

UNDERSTANDING *FELIS CATUS*

Dogs bond to a social group whereas cats are place-oriented, explains animal behaviorist Stephen Zawistowski, author of *Companion Animals in Society*. Early humans walked the Earth with dogs while cats moved from place to place via ships. It can be a bit more difficult for cats to adapt to new locations. But, Zawistowski adds, it's not impossible.

Many of the independent characteristics of our cats are chalked up to the fact that they were domesticated by humans much later—and far less completely—than dogs. But the ability to travel with us has far more to do with each cat's individual personality and especially whether a given cat has actually been socialized and trained to travel prior to a trip.

Consider Zawistowski's 15-year-old cat, Ghanima. For 10 years, she and her feline brother journeyed to the Poconos, Pennsylvania, every Friday. Time spent at the second home became routine. So, every Friday morning Zawistowski left the cat carriers out and every Friday afternoon the cats would walk themselves into their carriers.

"Ghanima's an experienced traveler," he says. But, "you can 'teach' an older cat new tricks for travel if you take your time and have some patience."

TRAINED TO TRAVEL

So, how can traveling with cats not feel like, well, herding cats? Ohio State University veterinarian Leanne Lilly, DVM, has a special interest in low-stress handling. She says stress-free travel comes down to exposing cats to low thresholds of a stressor followed by a reward, eventually encouraging the cat to choose to participate in the thing you want them to do.

Take the cat carrier, for example. Lilly says the proper method of getting a cat inside is to persuade them to walk into it, as Ghanima does. Sound impossible? Not with desensitization and counterconditioning. (See "Missing You," page 60, for more on these cat therapy techniques.)

"Desensitization is the process of presenting a stimulus or situation that causes fear, anxiety or stress in an effort to decrease that response," the fear-free certified vet explains. "You start at low levels that do not produce fear, anxiety or stress responses, incrementally increasing exposure over several spaced-out sessions."

Counterconditioning comes into play by adding a reward when your cat reacts neutrally to the stressor, provoking a positive emotional response in its place. Desensitization alongside counterconditioning is a tool for reducing fear and anxiety around vet visits, meeting new people, getting into the carrier, taking car rides and exposure to loud noise, among other situations.

"It's all about breaking things down into small steps and working at a slow pace that makes your cat comfortable," says Lilly, who concedes that desensitization and counterconditioning can be a lengthy process.

GO BY CAR

Stress-free travel by car starts inside your home, according to feline behaviorist LeeAnna Buis. If you haven't slowly desensitized your cat to their carrier and then to the car—start there.

Next, ensure your cat is experiencing a comfy ride. "It can be tough for a cat to feel physically stable in a moving vehicle," Buis says. Provide secure footing in their carrier by placing a small blanket or towel on the floor.

When you buckle up the carrier in the seat, face the carrier door toward the front of the car so the cat is oriented just like you are—not the side window where the world

FELINE TOTE

How to Ease Your Cat Into Her Carrier

Safe travels start with safe carrier practices. Follow these steps, which involve the psychological techniques of desensitization and counterconditioning (described in our main story).

- **Start Fresh**
Remove stress hormones your cat might have left behind by wiping the carrier clean.

- **Introduce the Carrier**
Leave the carrier out for your cat to see and sniff at their own pace.

- **Remove the Door and the Top of the Carrier**
Reward your cat for interacting and entering the bottom of the carrier. Encourage interaction with the carrier by playing in and around it. Feed meals nearby or on the carrier base.

- **Replace the Top of the Carrier**
With the carrier door unattached, repeat step three.

- **Replace the Door of the Carrier, Leaving It Open**
Repeat step three.

- **Close the Door With Your Cat Inside**
Don't immediately latch the door. Repeat this a few times before latching the carrier door closed with your cat inside. Reward your cat for neutral behavior.

- **Reward Comfort in the Carrier**
Slowly increase the duration your cat is inside of their carrier, rewarding them for neutral behavior.

Encourage exploration of the interior.

Some cat parents put calming pheromones inside the carrier to ease the stress of travel.

flies by in a streak. For longer car rides, your cat might appreciate a large crate with room to stretch and even a small, cozy hiding place. "Don't forget to plan ahead for overnight stays," Buis adds. Your top priority for any length of car ride is keeping your cat safe. Be on the lookout for signs of stress and never allow your cat to free-roam in a moving car.

> Preparing to travel with your cat can take weeks to months, so talk to your vet as soon as you know your plans.

JOURNEY BY PLANE

Cats are typically small enough to join their human companions in coach—if they come prepared in an airplane-approved carrier and with all proper documentation like their health certificate, proof of vaccinations and any diagnostic testing required by your destination. While traveling with your cat at your feet is less stress-inducing, and certainly far safer, than putting him in the climate-controlled cargo hold, it still comes along with several challenges.

"The trick with travel by plane is that it's a lot harder to approximate or mimic all of the events from the airport on," Lilly says in consideration of desensitization and counterconditioning prior to take-off. "But you can use recordings or sound effects widely available on YouTube to teach your kitty pre-travel that the sounds of conveyor belts, airplane engines and lots of people talking are all signals that a reward will be coming momentarily."

As for Mac and her parents, they took a hands-on approach with field trips to the check-in terminal before she ever boarded her first flight. She enjoys people-watching in the

A cat on a train peers out at nature during a stop, but when the train is in motion keep her secure on your lap.

RED FLAGS

Watch for These Signs

Once you get to know your pet, you'll be able to tune in to indicators of panic that could make travel stressful.

If you are seeing a fear, anxiety, or stress response in your cat's body language, desensitization and counterconditioning are going too fast and it's time to slow things down.

Signs of stress to look for in your cat include:

- Dilated Pupils
- Ears Back or Pinned
- Slinky or Low Body Language
- Puffed-Up Tail
- Tucked Tail
- Slow Movements

terminal, but when it's time to settle into her carrier for a several-hours-long flight, she lets her parents know she'd rather be out exploring.

The Buchanans recall not wanting to use any calming aids unless absolutely necessary. But after a few chats with their vet, they decided to have them on hand.

"Using sedatives like acepromazine can actually make situational anxiety worse over time, even if they produce a nonmobile cat initially," Lilly says. That's why, like Mac's trusty vet, Lilly recommends calming aids like Calming Care, Solliquin, Zylkene, Anxitane and even some calming diets.

Your veterinarian can help get everything in place from fear-free training to meeting the airline's documentation requirements.

PUBLIC TRANSIT

"Gibson first traveled on public transit when he was 3 months old," says cat mom Sarah. With his human baby brother and parents, Gibson is a frequent rider of the buses, subways and streetcars of downtown Toronto. "Sometimes, we travel on public transit just to maintain Gibson's skill of riding transit."

Between the smiles, stares and curious comments about a cat on the train, Sarah says riding public transit is exciting for Gibson. This is helped by dedicated desensitization to the sounds and people of a busy station, and counterconditioning with a high-reward treat. Plus, Gibson never leaves the house without a harness and leash, along with a backpack so that he can happily curl up.

"We try to be cautious of the fact that people may be allergic to cats. We usually find a more remote place on the train away from others," Sarah explains. Avoiding rush hour is also a go-to for the family.

Should you travel with your cat? Only you know. "The vast majority of cats are domestic shorthair. They're a true feline mosaic and you will find the full range of personalities and behaviors among them," Zawistowski says.

Life experiences, genetics and medical conditions all play a role in who your cat is and what they choose—or don't choose—to do. Take note of your cat's personality and practice safe travel if they're up for it. Consider a trusted pet sitter or boarding facility if they're not.

GENEROSITY

Give Your Pet a Gift

Animal behaviorist Zazie Todd, author of the blog Companion Animal Psychology, explains why you should offer your cat a present on those special occasions throughout the year.

BY MARK TEICH

Does giving your cat a birthday or Christmas gift seem a little too precious? Think again. According to a Petfinder.com poll, a whopping 58% of cat owners give their pets Christmas presents, and 37% even hang stockings for them. Overall, Americans reportedly spend some $5 billion annually on

Just like humans, cats get jazzed when you surprise them with an unexpected gift tied with a bow.

This kitty will have a ball tearing through the wrapping paper to get to the prize inside.

holiday gifts for pets, and $50 billion annually for non-holiday gifts.

Certainly, cats, like people, love to be given things, but does the occasion, say, of a holiday or birthday really have anything to do with it? Does a cat have any understanding whatsoever of what a special occasion even is? Or is the gift itself the only point, no matter when you give it?

Here, animal behaviorist Zazie Todd offers some real reasons why it's valuable to make a production of giving a gift to your feline at times that people ritually celebrate for themselves.

What's the difference, really, between giving your cat a gift for her birthday or over the holidays versus simply handing her a treat at any other time of year? Does a cat have any clue that there's a special occasion involved?
Well, obviously, your cat doesn't understand what Christmas is or that it's their birthday or adoption anniversary. He won't necessarily register that it's a special occasion, and certainly won't grasp the rituals of the occasion, he'll just love that you're giving him something to enjoy. But he does have an awareness when the family comes together, and if the family is enjoying a day together, your pet will usually want to be part of those family experiences as well. Pets like to be included in the things we're doing. So, if it's the holidays and your cat sees people giving gifts to one another, he's not thinking, "Where's mine?" but he will enjoy it if you give something to him as well. And the more you involve him in the things the family is doing, the more he will feel part of the family. We know that such positive experiences are important for good animal welfare.

Doesn't this help the family feel more connected to the cat as well?
Of course, it's another element of fun for the family, and it helps

SURPRISE!

Keeping Presents Simple

Your feline isn't looking at the price tag or even the brand when she decides what she enjoys most.

When you're deciding what to give your cat, keep in mind what she likes, says animal behaviorist Zazie Todd. "Think about the types of things or activities that they really enjoy, and if that's what your cat loves, just keep giving those things as gifts."

One obvious choice is treats. Whatever type you choose, once you or the cat has opened the box, hide the rest in different places she will have to do some searching to find.

Todd also really likes toys for cat gifts, "because they're things that your pet can do something with."

She is especially fond of toys like snuffle mats that force the cat to think to get food out of, because such toys provide mental enrichment, and cats need continual enrichment throughout their lives to achieve their full potential. "You can also make a type of snuffle mat yourself, anything you can hide food in for your cat to find." You can put it in a remote room, under the bed, wherever the cat might come across it on his explorations. It should be made of a material that will take some work and thought to get into. "There are also some wonderful food puzzle toys on the market that may be more expensive, but they're really a lot of fun for a cat to play with," says Todd. "These things keep them active and happier and also help prevent behavior issues."

She also suggests a wide range of toys that represent types of prey, because cats are such natural hunters. One such toy is simply a cork with a feather sticking out of it, something that resembles a bird and can be ripped to shreds. "I really love toys like this," says Todd. "Toys for cats don't have to be things that last a long time. In fact cats enjoy it when the toy is starting to fall apart, because it makes them feel like when they're playing with and eating their prey and it's falling apart." It may sound gruesome, but that's what cats love. "If the feather comes off the cork, you can just replace the feather," she notes.

Todd stresses that the gift of your time and company is just as important as material items. "Pets love the things we give them, and being there to see them enjoy them brings us closer to them," she says. "We get to share that experience with them and see the happiness it brings. Positive experiences like that are good for their welfare, and it builds a better bond."

This cat likes her present but loves her human more.

An empty cardboard box gives kitty a secure place to hide. As far as gifts go, you often can’t beat it!

them all feel closer to the pet. You get to see your cat being happy playing with the toy, or whatever it is that you've given them, and you all get to share that experience with them. It helps to build a better bond between the cat, you and the entire family.

Remember, in adulthood the types of gifts your cat enjoys tend not to change from one year to the next.

But how far do you go with all this? Do you wrap the gift up in a box with strings, ribbons and a bow the way you do for everyone else? Or is this just getting excessive and silly?
Actually, the wrapping can be fun for your cat. She may react just like little children do, madly tearing the ribbons and strings and bow off the box. A lot of cats might also enjoy shredding the paper and sitting in the box or tearing it apart to get the gift. It can all be part of their experience.

I've heard it said that one of the nice things about giving birthday and holiday gifts to pets as opposed to people is that you don't have to worry so much about whether you've chosen the right gift. Your cat isn't going to judge your choice; you pretty much know she's going to enjoy whatever you give her.
True, there are many things about giving gifts to your pets that make it easier than giving to humans. There's actually research showing that giving a gift to their pets makes people happier than giving a gift to another person or to themselves. For one thing, if we give a person a gift, we often don't get to see much of the experience of their using it or enjoying it. But if we give our cat a toy, say, we get to watch it and share in the experience, not just that day, but maybe every day for the next week or month or however long; the cat's pleasure and our pleasure go on for a long time. So that's quite a nice aspect.

Many cats love chasing a ball, whether it's across the room or within the pathway of a colored toy.

Also, when we give gifts to a friend or co-worker, it's trickier to negotiate. You have to think about whether it's the right level of gift, whether they'll appreciate it and whether they'll feel they have to reciprocate, whereas when we give a gift to our cat, there are no strings attached; we don't expect anything back. It's all just fun, and something to make them happy. I think that's a really nice aspect of giving gifts to pets.

Furthermore, you don't need to give a cat some spectacular, extraordinary gift, and it doesn't need to be expensive. You can just buy a little cat toy or a box of treats cheaply, which means you can give gifts much more often. And it's fine to keep giving the same kinds of gifts again and again, because you know what your cat loves.

CATALOG

The Goods

Reviewers have had a blast describing the most unique kitty offerings for 2023. Here are five top items recommended in recent media reviews.

- **Catit Flower Plastic Cat Fountain**
Selected by Wirecutter, this ingenious 100-oz. water supply features three different settings to entice selective drinkers—choose between a gentle flow, bubbling top or calm stream. With no bowl for the water to pool in and a superior filter, this eye-pleasing fountain keeps dirt, debris and other nasties out of your kitty's drink. *chewy .com*, $24

- **Cat Ball Bed**
Also selected by Wirecutter, this comfy snooze spot features high-density foam cushioning for cat ecstasy. Plus, it looks really great in your home! *thecatball.com*, $70

- **Ultimate Blend Catnip & Silver Vine Mix**
The 2-oz. tub is a top choice of The Spruce. This mixture is important because silver vine may work for cats who don't normally have a reaction to regular catnip alone. *chewy.com*, $8.50

- **The Ultimate Cat Condo**
CNN likes this PAWZ Road Cat Tree, which features a scratching post, a cat condo and a padded perch to sit on. *amazon .com*, $50

- **Tower of Tracks**
BuzzFeed recommends this three-tier toy with polka-dot balls. With bright colors and spinning balls, this takes the hunt to the next level. A small safety bar across the top central opening keeps overly curious kittens and smaller cats from getting stuck. The price for this Petstages tower works when you're modest in budget but big at heart. *amazon.com*, $13

RELLES
BABY IT'S YOU
GGY L
Y NATIVIT

A young Dusty Springfield is shown here with a pet cat. Years after this photo was taken she left a fortune to another beloved pet, a Ragdoll named Nicholas.

HEIRS

Lives of Million-Dollar Cats

The stories may be rich, but not every pet gets their paws on the money. **BY DORRI OLDS**

When Chanel designer and fashion icon Karl Lagerfeld died in 2019 at age 85, the press had a field day announcing that he'd left his tortoiseshell Birman pussycat Choupette a large chunk of change. His net worth was estimated to be $200 million to $300 million. The headlines were wildly entertaining at first. But it soon became challenging to pinpoint precisely how much of Lagerfeld's fortune landed in Choupette's pampered paws. Celebrities, billionaires and eccentrics may have the best intentions for their beloved four-legged family members. But what many may not know is how complicated things can get.

According to Bloomberg, Lagerfeld's will created complications that led to further complications. And under German and French law, the actual amount making its way to Choupette will remain confidential. Attorney Bernhard Schmeilzl of Graf & Partners LLP in Munich said, "The money never belongs to the cat. Inheriting is nonsense. The tax situation can be a real headache." But Choupette will be fine. She has earned millions on her own through modeling and batting her "clear shade of sapphire blue" eyes. Check her out on Instagram @choupetteofficiel.

Margaret Layne was a wealthy Brit. She'd been widowed by an Italian real estate investor, and they had no children. She befriended a stray cat that she named Tinker. Upon her death, Tinker inherited an estimated $900,000. The kitty lived out his days in Layne's North London home, which wasn't to be sold until his death. Layne left neighbors Ann and Eugene Wheatley in charge of maintaining the house and caring for Tinker—including providing his favorite treats. The Wheatley's cats, Lucy and Stardust, moved in, too.

Tommaso was another lucky feline. The 4-year-old black cat hit pay dirt when found wandering the streets of Rome. Maria Assunta, a childless widow of an Italian tycoon, rescued Tommaso and left him $13 million in a handwritten bequest. Assunta's nurse Stefania told *The Telegraph*, "I promised her I would look after the cat when she was no longer around. She wanted to be sure that Tommaso would be loved and cuddled. But I never imagined that she had this sort of wealth. She was very discreet and quiet. I knew very little of her private life. She only told me that she had suffered from loneliness a lot."

Guinness World Records named Blackie, the last of antiques dealer Ben Rea's 15 felines, the world's richest cat. Rea left Blackie $12.5 million, and most of the rest to cat charities. Interestingly, Rea's sister Dorothy died a few days earlier, leaving $5 million to animal charities.

British singer Dusty Springfield left a sizable yet unspecified gift to her 13-year-old Ragdoll cat, Nicholas. She also left specific instructions for the Ragdoll's care—

Nicholas was to be fed imported American baby food. Springfield also requested that her songs be played for him every night before bedtime. Lucky 'lil Nic also enjoyed a 7-foot indoor tree house studded with hearts and filled with scratch pads and catnip. The *New York Post* added that Springfield was terrified Nicholas would be sent to the pound and live his final years in a cage. So, Springfield wrote her sweet Nicholas into her will, giving him to Lee Everett-Alkin, whose 5-year-old English blue breed Purrdie was to be his bride.

Often, the money goes to a dog. Leona Helmsley, the "Queen of Mean," lived up to her moniker. Despite inheriting a fortune of approximately $5 billion in assets, Helmsley left two of her four grandchildren bubkes "for reasons known to them." Yet in a 14-page will, she bequeathed Trouble, her Maltese, a $12 million trust, along with instructions that he lie beside her in a mausoleum upon his doggy death. The trouble for Trouble came when the two grandkids opened a lawsuit. The judge decided Trouble could live on a mere $2 million budget. And it took 12 years to get the vast estate's particulars worked out.

And it's not always cats and dogs. Gigoo was a "Scots Dumpy" hen—a rare breed of Scottish chicken—who inherited $15 million after the sudden death of her doting dad, British publishing magnate Miles Blackwell. Miles and his wife, Briony, had recently retired from Blackwell Publishers, his family's business. The childless couple set out to live in the Oxfordshire countryside and raise rare livestock. Sadly, in less than a year, Briony died at age 46. Three weeks later, Miles died at 56. Writer Maria Carter added, "The Blackwells also left $42.5 million to a charitable trust they established to benefit arts, music and animal welfare causes, including the preservation of rare breeds."

BEQUEST

Calling All Non-Billionaires

How to ensure your animal will be cared for after you die.

So you want to protect your beloved pet in your will? You don't have to be wealthy to arrange for perpetual care. For some guidance, we reached out to Best Friends animal group's planned giving manager, Matt Claflin. He and his wife, Megan, who live in Utah, have four cats: Sasha, Rose, Winnie Fred and Stinker; four dogs: Matilda, Sammie, Puppet and Eleanor; two sheep: Sonia and Sylvia; and two rabbits: Milton and Anna. "We also take in fosters," Claflin says.

Here are his top tips for protecting your pets should they outlive you:

- When you plan for your animals in a will or trust fund, you must name an individual or group to care for them. Any lawyer can set that up for you.

- If you don't have a specific friend or family member who is willing and able to care for your pet(s), there are hundreds of animal welfare organizations that have volunteer animal lovers like the Claflins who are available to take on that role. In those cases, you can opt for what's called a "Perpetual Care Program."

- The structure of a Perpetual Care Program is specific to organizations. In simpler terms, that means that a nonprofit of your choice is assigned in a written agreement that accompanies your will. Without that, you run the risk of some random person surrendering your beloved pet to a kill-shelter.

- Everything your pet needs must be put in writing. Why? Because at least half a million pets are surrendered to U.S. animal shelters annually. That only happens when pet owners don't make proper arrangements ahead of time. Legally, money and directives cannot be left to a pet.

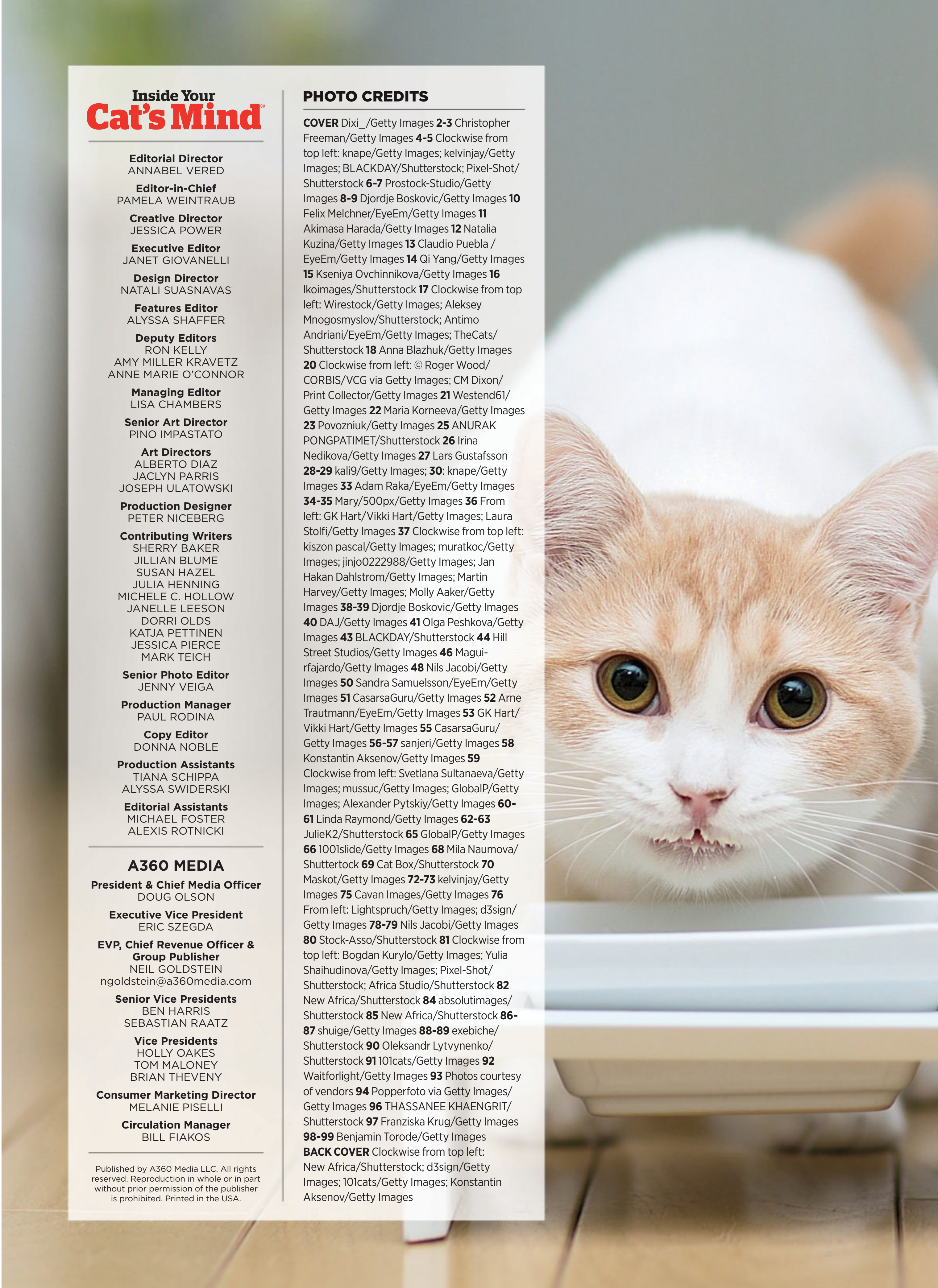
- Claflin suggests visiting 2ndchance4pets.org for more information for planning. The site also includes a free will-writing tool.

Remember: It is always possible to plan for the future care of your felines, canines and any other nonhuman loved ones. You've got the power. You got this. Fist pump.

It will take more than a piggy bank of nickels and dimes to care for a cat for the rest of her life.

Choupette could be the most pampered feline in the world, but does she have more fun than the average cat?

Karl Lagerfeld's cat, Choupette, now age 11, is one of the world's most famous animal heirs. She is currently cared for in Paris by the designer's former housekeeper, Françoise Caçote, who serves as her nanny.



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Cat's Mind®

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